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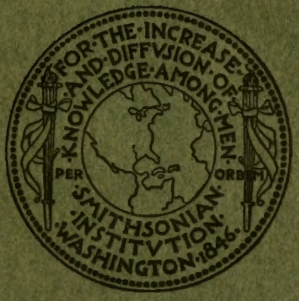

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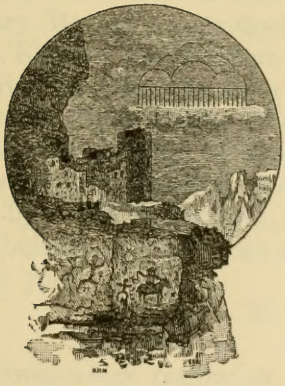

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LETTER OF TRANSMITTAL

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., December 10, 1937.

SIR: I have the honor to submit the accompanying manuscripts, entitled "A Preliminary Report on Archeological Explorations at Macon, Ga.," by A. R. Kelly; "The Northern Arapaho Flat Pipe and the Ceremony of Covering the Pipe," by John G. Carter; "The Caribs of Dominica," by Douglas Taylor; "What Happened to Green Bear Who Was Blessed With a Sacred Pack," by Truman Michelson; "Lemhi Shoshoni Physical Therapy," by Julian H. Steward; "Panatübiji', an Owens Valley Paiute," by Julian H. Steward, and to recommend that they be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. STIRLING, *Chief.*

DR. C. G. ABBOT,
Secretary of the Smithsonian Institution.

NOTE

With this bulletin the Bureau of American Ethnology inaugurates a new series of Anthropological Papers, designed as an outlet for brief articles.

These papers will be numbered consecutively, a bulletin being devoted to them from time to time as they accumulate.

A limited edition of bound volumes will be issued but the papers will be generally distributed in separate form.

M. W. Stirling, *Chief.*

CONTENTS

		Page
No. 1.	A Preliminary Report on Archeological Explorations at Macon, Ga., by A. R. Kelly	1
No. 2.	The Northern Arapaho Flat Pipe and the Ceremony of Covering the Pipe, by John G. Carter	69
No. 3.	The Caribs of Dominica, by Douglas Taylor	103
No. 4.	What Happened to Green Bear Who Was Blessed With a Sacred Pack, by Truman Michelson	161
No. 5.	Lemhi Shoshoni Physical Therapy, by Julian H. Steward	177
No. 6.	Panatübiji', an Owens Valley Paiute, by Julian H. Steward	183

SMITHSONIAN INSTITUTION
Bureau of American Ethnology
Bulletin 119

Anthropological Papers, No. 1

A Preliminary Report on Archeological Explorations at Macon, Ga.

By A. R. KELLY

CONTENTS

	Page
Introduction	1
Evidence of a prepottery flint industry on the Macon Plateau	2
The pottery-agriculture base in Ocmulgee Fields	8
The mound-building period on the Macon Plateau	14
Prehistoric spring sites on the Middle Plateau	18
Explorations at Mounds A and B, Macon group	19
Archeological reconnaissance of Brown's Mount	23
Swift Creek and the evolution of stamped ware	25
Other site exploration in Ocmulgee related to Swift Creek	31
The chronological position of Swift Creek in Macon chronology	32
Additional observations on the distribution of stamped pottery	44
Exploration of Lamar mounds and village site	46
The trading post chronology	51
General conclusions	58
The antiquity of stamped pottery in central Georgia	58
Mississippian influences on the Ocmulgee Basin	61
A tabulation of site exploration with statement of tentative chronological implications	63
Classification and terminology	66
Index	197

ILLUSTRATIONS

Plates

Page

1. *a*, View of prehistoric cultivated field. *b*, Vertical profile cut through Mound D 68
2. *a*, Initial profiling and horizontal stripping to uncover field beneath Mound D. *b*, Beginning exploration to uncover earth lodge 68
3. *a*, Students removing debris from floor of earth lodge. *b*, Profile cut through fill to dugout 68
4. *a*, Survey of outer series of dugouts. *b*, The 9-foot level between Mounds A and B 68
5. *a*, Profile panel through Mound C. *b*, Profile section through Mound C 68
6. *a*, Exploration of McDougald Mound. *b*, Log-tomb burial, Mound C 68
7. *a*, Exploration to uncover spring site. *b*, Profile panels exposed in fill to prehistoric dugouts 68
8. *a*, Exploration of Mound A, Swift Creek. *b*, Explorations on Mound A and at Lamar site 68
9. *a*, House site exploration at Lamar site. *b*, Cremated burial, Middle Plateau 68
10. Group of sherds 68
11. *a*, Sherds from Swift Creek. *b*, Sherds from Macon Plateau 68
12. *a*, Sherds from Lamar Mound. *b*, Sherds from Old Ocmulgee Fields 68

Text Figures

1. Key map to site exploration, Ocmulgee Basin 3
2. Macon Plateau 4
3. Flint artifacts from Macon Plateau 5
4. Patinated flint artifacts from Macon Plateau 6
5. Find No. 103, West Plateau 7
6. Stratified village site 8
7. Graphic chart 66

A PRELIMINARY REPORT ON ARCHEOLOGICAL EXPLORATIONS AT MACON, GA.

By A. R. Kelly

Introduction

The purpose of this paper is to present within narrow limits a statement of progress in site exploration at Macon during the last 4 years. Such implications of chronology as seem justified at present will be given in broad outline.

Necessarily the question of chronology must be approached very cautiously as exploration in the Ocmulgee Basin in central Georgia has resulted in a great mass of data and field collections which have not been completely studied or analyzed. The sites have yielded an unanticipated wealth of material. Stratigraphic indications of cultural continuity, coming both from physical superimposition of deposits and typological distinctions in collections made at several points (horizontal stratigraphy) offer a series of data permitting certain generalizations which now seem to be sufficiently substantiated to be worthy of consideration. It may be advantageous to give a preliminary conception of chronology along with the description of a specific site.

Inasmuch as each of the site explorations will ultimately require extended presentation to give all the essential field data, the present article must be confined to a broad summation of field results. The detailed facts of supporting evidence must await further opportunity for expression.

The method of presentation will be to summarize current results in connection with the specific sites which seem to represent periods of evolution or cultural change in the Ocmulgee Basin. In order to give continuity to interpretation, the key sites will be taken up in order of their apparent cultural annectence rather than the order of time in which they were explored (fig. 1).

A brief statement regarding the history of the work might be made for those who have not been informed. Work began in December 1933 under the auspices of the Smithsonian Institution, as a Civil Works Administration project. The Society for Georgia Archaeology cooperated in the initiation of the project. Large mound and

associated village sites in the Ocmulgee Basin near Macon, Ga., were selected for exploration. Investigation continued subsequently under various relief organizations. Archeological explorations have been continuous since December 1933 to the present time. In 1935 the Ocmulgee National Monument was established by act of Congress. At the present writing the National Park Service is completing explorations and beginning restoration of exhibits and prehistoric structures.

Evidence of a Prepottery Flint Industry on the Macon Plateau

The Macon Plateau has been the center of protracted and intensive study. Topographically it is not a true plateau but consists of a flat peneplaned hill section formed from the ancient east river terrace of the Ocmulgee River. The slopes dip very gradually on all sides to the river plain on the west, to low-lying marshes south and southeast, and to secondary ravines of drainage slopes north, northeast, and northwest.

The geological formation is basal Eocene. Top soils are weathered loam with characteristic A and B profile developments extending down into unmodified red clay. In the Central of Georgia Railway excavation, made in 1871 through the middle portion of the plateau, a good cross section may be seen. Underlying the Eocene red clay crust of the plateau are manganous and ferruginous lensed clays, "calico clay," which lie unconformably over kaolinitic deposits of Cretaceous origin.

Macon is on the fall line which extends across central Georgia from Columbus to Macon, to Milledgeville, to Augusta. At or near the Macon Plateau the Ocmulgee cuts through the last remnants of the piedmont and follows a meandering course through broad marshy flood plains to join with the Oconee 90 miles downstream, whence, as the Altamaha, it reaches the Atlantic coast at Darien.

The summit of Macon Plateau is the seat of several large mounds, both conical and pyramidal truncates (fig. 2). Modern plantation cultivation has uncovered great quantities of pottery and worked flints implying heavy village occupation.

The evidences of a prepottery flint industry have been accumulating over a 4-year period of exploration. Proper presentation of all the facts would require much more space than is here available. It must suffice at this time to state the general nature of the problem.

First of all, several thousand worked flints have been dug from the plateau in extensive trench exploration. Typologically these exhibit many primitive chipping characteristics and indicate a surprising assemblage of specialized scrapers, any one of which, on technical grounds, might be sufficiently distinct to identify a flint industry (fig.

3). The worked flints are practically all made from secondary slivers or flakes and show chipping techniques reminiscent of the middle and late paleolithic in Europe (fig. 4). The convergence in workmanship is in many instances truly remarkable.

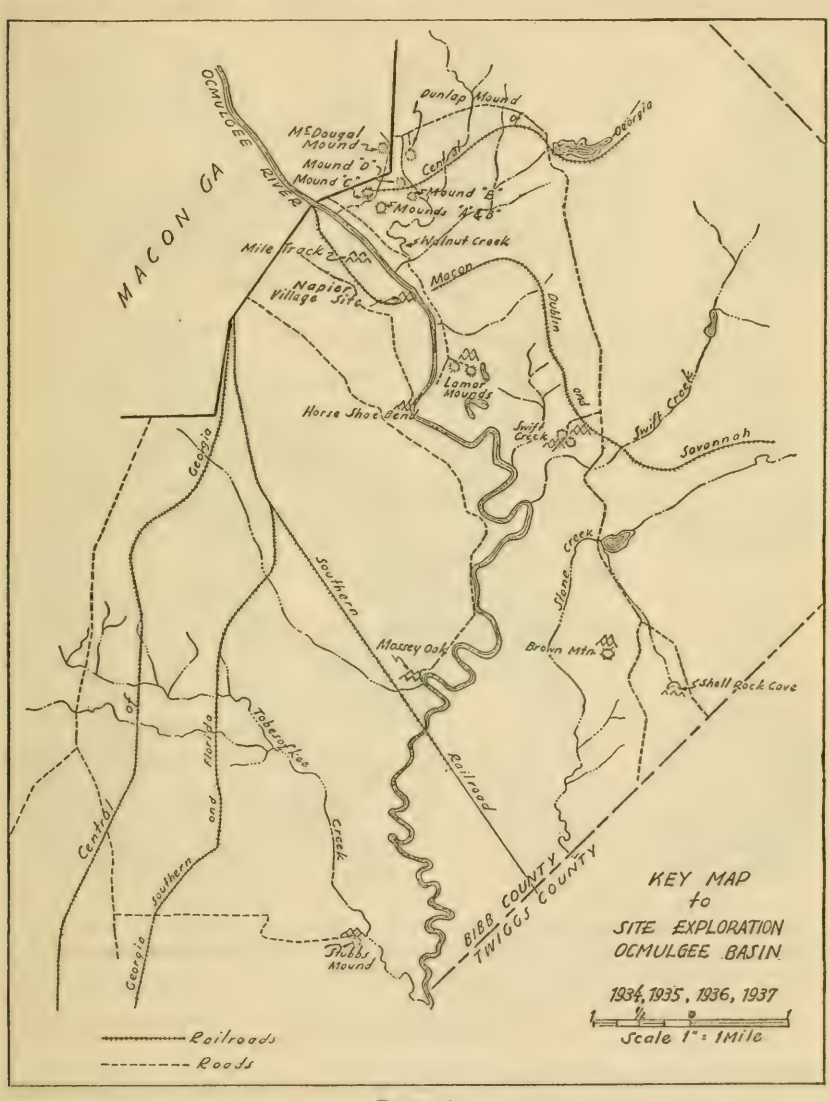


FIGURE 1.

The second consideration of importance in regard to the Macon flints relates to the stratigraphic distribution of these specimens, which have been described as having the specializations which might be expected of an early hunter people. A great majority show advanced decomposition or patination to an extent seldom observed in American

collections.[1] The possibility that this unusual change in flint cortex may be a response to soil conditions, climate, or special flint constitution peculiar to the area has not been ignored. Evidence at hand tends to show that flint artifacts of similar mineralogical nature in the same soil matrices do not change within 700 to 1,000 years.[2]

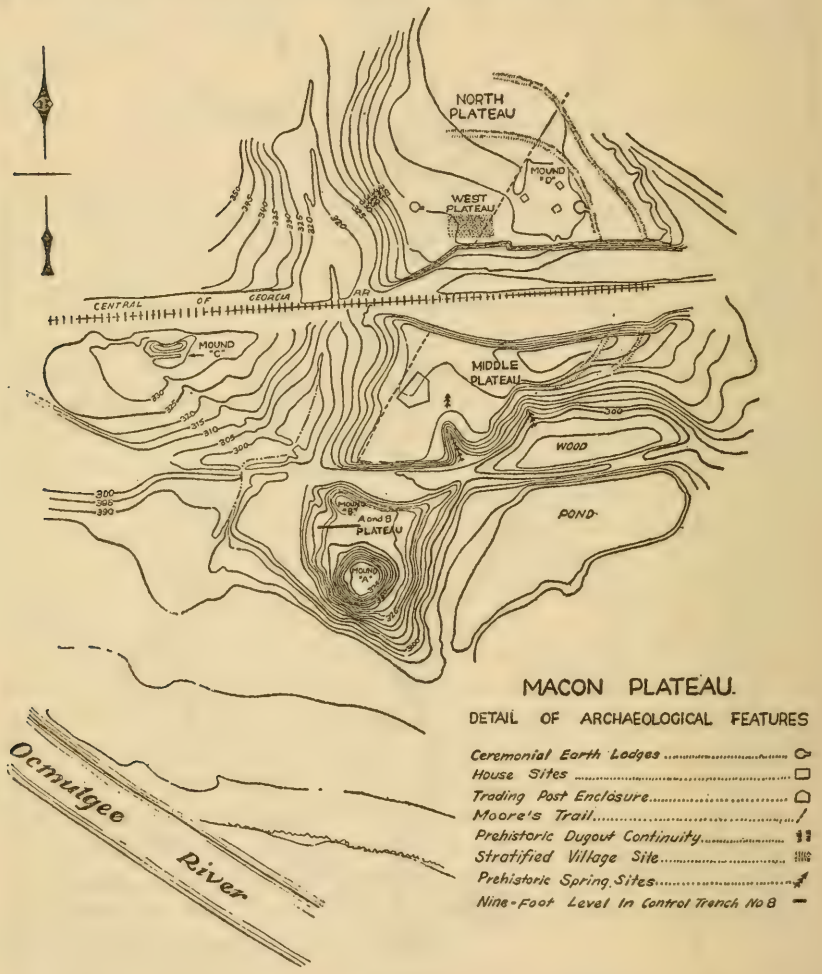


FIGURE 2.

Flint taken from the seventeenth century trading post, from prehistoric occupations and house sites, and from stratified deposits at

[1] It is probable that the marked modification of flint cortex observed in Macon flints should be referred to as decomposition, weathering, or alteration rather than patination. The measured degree of cortical change in some Macon specimens is greater than that in Kentian eoliths, England.

[2] Dean Leon P. Smith of Wesleyan College, Macon, Ga., carried out extensive investigations of the problem of flint decomposition in comparative series of worked flints collected on various sites in Georgia. His death in 1937 represents a great loss to science. He was one of the few individuals familiar, through long study, with local geology and had been interested for many years in the subject of weathering in rocks. Dean Smith was preparing a manuscript summarizing the results and tentative conclusions of his work at the time of his death.

several different points on the plateau show no modification of cortex, or only incipient change. On the other hand, cataloged flints from deep-lying weathered loam and fossil soils beneath the oldest mounds show a progressive increase in mean patination from original plateau surface to the lower soil zones. The progressive increase in decom-

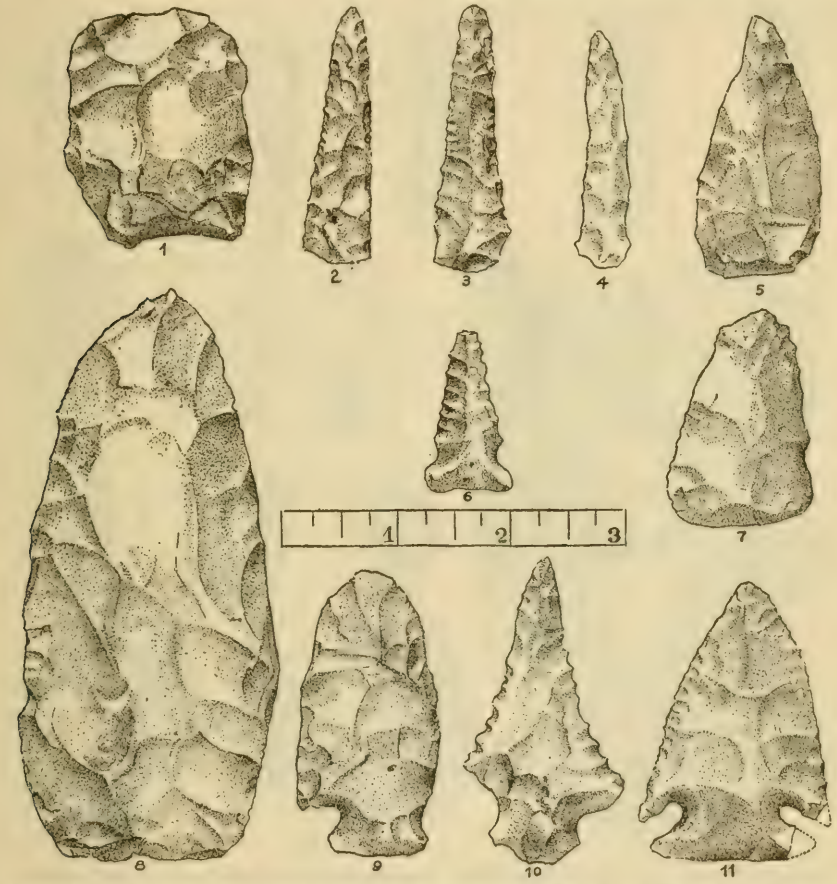


FIGURE 3.—Flint artifacts illustrative of the more "generalized" classes of tools from the Macon Plateau. Nos. 1 and 5 are chisel-like knives. Nos. 2, 3, and 4 are drills. No. 7 is a plano-convex type of end scraper with plateaulike upper surface replacing the usual median keel. No. 6 is a "spinner" projectile exhibiting the unilateral chipping and asymmetrical balance characteristic of this very prevalent type. Nos. 9, 10, and 11 exhibit notched forms whose typology, relative decomposition of cortex, and distribution in weathered soil zones would seem to indicate greater age conditions.

position amounts to as much as 100 percent at a level over 20 inches below the old plateau surface.

Correlated with the decomposition of the flint is a marked weathering of the exposed soils mantling the plateau. Soil profile developments assimilate features observed by soil scientists in the glacial area of the northern and eastern section of the United States. Along with the development of soil profiles goes the formation of nodular

soils with heavy precipitation of iron and manganous nodes. The developments have been definitely perceived to take place in archeological contexts and the question has been raised as to how rapidly acceleration might take place under very favorable conditions in the semitropical southeastern area.[3]

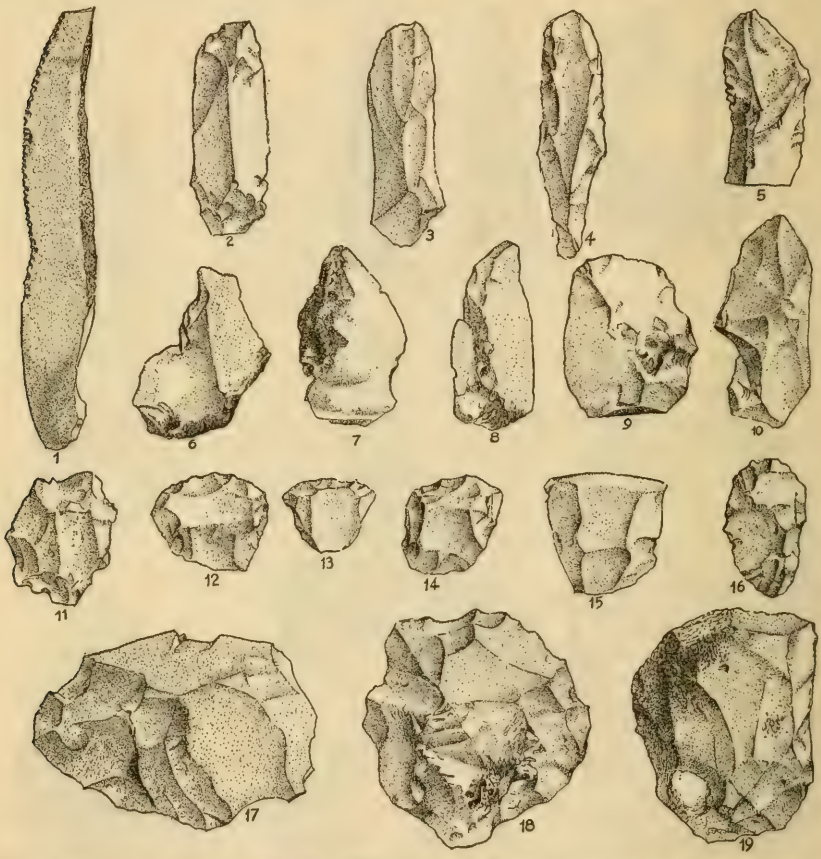


FIGURE 4.—Patinated (decomposed) flint artifacts from the Macon Plateau showing specializations for woodworking and skindressing. Nos. 1 to 10 are knives or composite tools illustrating the geometric form exhibited frequently in Macon collections cataloged from deep weathered loam. Nos. 11 to 16 show characteristic forms of end scrapers. Nos. 17, 18, and 19 are large "turtle backs," massive round or broad oval-end scrapers of specialized aspect.

Another important factor is the vertical distribution of flint with regard to pottery on the Macon Plateau. A 600-foot correlation test trench was excavated and over 10,000 sherds and pieces of flint scrap cataloged precisely to determine mechanical conditions of movement in the weathered soils. This experiment demonstrated that pottery and flint occur in approximately equal amounts in the upper

[3] Two distinguished geologists, Dr. C. O. Sauer, University of California, and Dr. R. J. Russell, Louisiana State University, visited the site of explorations at Macon and observed the unusual soil profile features in archeological contexts and the heavy decomposition of flint artifacts.

occupation levels but that pottery diminishes and disappears from the lower weathered zones, whereas worked flints increase very markedly. The same conditions were found in correlations of flint and pottery distribution in fossil soils preserved beneath prehistoric mounds. Another feature related to this, but involving the horizontal distribution of old flints, is the fact that isolated small areas on the plateau show heavier concentration of rotten, decayed flint scrap suggesting flint knapping sites. From these spots strata box collections show notable increases at a depth of 15 to 24 inches. The overlying soil burden appears to be natural soil with normal profile development.[4]

Some interest in the problem comes from the fact that both the cutting tools and the projectiles have a "Folsomoid" aspect (fig. 5). One projectile cataloged from the Macon Plateau has been authenticated as a true southeastern type Folsom, replete with all the essential identifying characters.

Other projectiles from deep weathered loam show the same attenuated "Folsomoid" traits in less striking degree. The variations in fluting or longitudinal grooving, in form, and in the haft appear to be specializations peculiar to the southeastern Piedmont region, as comparable specimens occur elsewhere in Georgia in private collections.

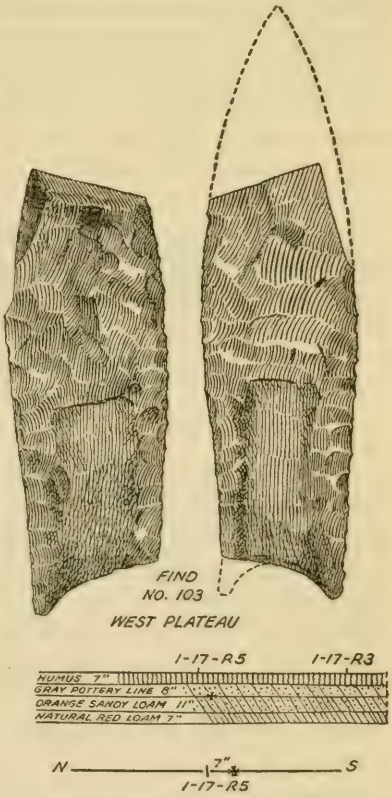


FIGURE 5.

The scrapers, knives, perforators, and drills more closely resemble western prototypes. However, several distinguishing specializations appear on the Macon Plateau.

A class of broad, snub-nosed, plano-convex scrapers with shelving haft are noteworthy.

Another specialized series of scrapers found only in deep weathered loam, and always exhibiting heavy decomposition, is represented by large, massive, round, plano-convex tools. These may be 2 inches or more in diameter and a half inch thick. The peripheral cutting edges are secondarily chipped.

[4] The possibility of simple intrusion by way of stump holes, animal burrows, or soil lesions of any kind, has been ruled out by several extensive explorations undertaken solely to check distribution, including correlation studies made of soil zones in fossil soils beneath prehistoric mounds on Macon Plateau.

Long, double-ended scrapers with concave under side and longitudinally convex keel represent a peculiar form. These artifacts have cutting edges 2½ to 4 inches in length which show secondary working.

A planing tool with stem haft, having the cutting plane chipped at an acute angle with the lines of the base, is another unusual form.

The Pottery-Agriculture Base in Ocmulgee Fields

Within 100 yards of the spot where evidences of a prepottery flint industry were first noted on the Macon Plateau a very complex stratified accumulation of cultural debris has been intensively explored over a 2-year period. The method employed has been to make vertical cross-sectional cuts at 10-foot intervals through the area, as offsets from a system of control trenches. Subsequently, horizontal stripping,

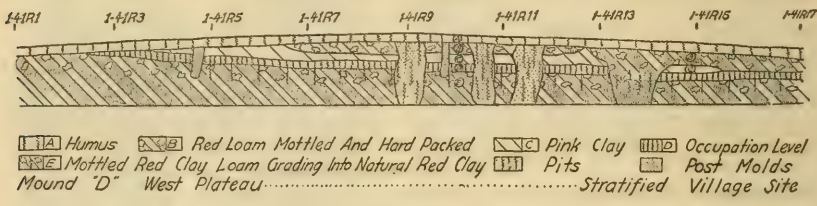


FIGURE 6.

with the taking off of each stratified level or soil element individually exhibited in the vertical profile panel, has been followed in order to give the maximum detail in cataloging and in describing context.

The evidence from this site, called the stratified village at Mound D (fig. 6), shows at least three occupation levels in which pottery, baked-clay basins, burials, domestic pits, and indications of house sites have been found. The domestic pits are clearly seen to be intrusive from several building levels. The materials from surface pits and house floors show that there was an historic Indian occupation with trade material in conjunction with Indian pottery and flint artifacts; also a top prehistoric series of house floors and clay basins characterized by a definite pottery complex; a deeper buried black soil midden containing numerous artifacts and pottery gives a heavy predominance of stamped ware of distinctive character. This stamped pottery in the deeper prehistoric level in the stratified village at Mound D is characterized by exceedingly small, neatly cut designs, geometric in form, but with suggestions of a highly conventionalized linear expression which may have been once naturalistic. The patterns have a cameo distinctness and fineness of execution which serve to identify all sherds belgonging to this classification and to distinguish them easily in any site, however complex, in stamped pottery classes. We have, in fact, to deal with a pottery complex whose morphological determinants are quite distinct from the other classes of stamped pottery found in the area. This class of stamped pottery has a wide distribu-

tion, as shown in reconnaissance on several rivers in central Georgia. I have given it a nongeographical name, calling it simply "Delta" class ware.

The statistical analysis of the stratified village at Mound D has not yet been made. It will serve our purpose at present merely to state that the data indicate that Delta occurs in the lowest prehistoric level and that, in conjunction with this ware, we have indicated a marked increase in the use of quartz and quartzite stone implements. There is evidence that quartz and quartzite were used almost to the exclusion of flint, a peculiarity which seems to characterize sites located on the Oconee River 40 miles north where quartz increases to over 90 percent in all collections in association with heavy percentage of Delta ware.

Regarding again the profile panels through the stratified village site we note a soil zone beneath the lowest prehistoric occupation level, on which we have described Delta pottery and quartzite tools as being largely distributed, in which the original clay geological formation is seen to be weathered and mottled, exhibiting a normal profile development shading insensibly into unmodified red clay. At a point 5 to 6 inches below the lowest prehistoric occupation level quantities of decomposed, worked flint were cataloged. And in this substratum there was no pottery. The flints coming from the weathered loam beneath the occupation level show the primitive characteristics of chipping previously described and the specializations noted.

In the stratified village at Mound D, in addition to Delta there have been found significant percentages of other classes of early stamped ware and a large floating mass of very coarse, plain, grit-tempered sherds, poorly fired and generally much eroded. The surface finish and paste characteristics of this plain, coarse ware are quite different from that observed in the Delta stamp.

Mound D, seated on the northwest rim of the plateau within 100 yards of the stratified village just described, presents a neat picture of stratified layers relating to soil sheets developed on the sides of the original mound, the structure of the mound itself, and cultural features beneath the mound, including a buried occupation level which, in turn, shows a gradation through the zones of weathered soil presenting the same features described for the stratified village. In all, at least nine structural layers or levels have been determined for Mound D, briefly, as follows: (1) the accumulated soil creep and outwash soils developed on the slope of the mound covering; (2) a buried sod marking the original mound slope into which intrusive pits were made which contained seventeenth century glass beads, gun flints, iron, and other European trade objects in association with Indian materials; (3) a thick mantle of red clay entirely covering the mound and averaging 8 to 14 inches in thickness, beneath which (4) a series of super-

imposed house floors were brought out directly on the summit of the mound. Over 600 post molds were found on the summit of the mound beneath the red-clay plate, intrusive through a bluish or slate-colored clay floor prepared from river-bed clay. Two of these houses were determined to be large square structures, and one of them had a series of fired clay basins built in the floor. These are thought to have been used for storage of maize. Beneath the slate-colored clay floor of the house sites on top of the mound was found (5) the main body of the mound structure consisting of basket-laid white and tan-colored sand held in place by the clay plating as a bonding material. In the southwest quadrant of the mound survey an inclusive house mound was found beneath the basket-laid sand of mound body. The house mound was square, about 3 feet high, neatly ramped, with a prepared baked-clay floor, and with indications of galleries on the northwest and southeast ends of the building. Pottery from this large house site was predominantly plain, coarse, red or orange in color from firing, without specialized characteristics, and similar to the generalized common domestic ware found in the stratified village site. The mound had been built over and had enveloped the smaller house mound.

Beneath the house, and everywhere underlying the basket-laid sand in the mound body, was uncovered a series of artificially arranged rows of soil, a dark, chocolate color, rich with midden, contrasting with the white sand of the enveloping mound. In the vertical profiling of the mound we had perceived uniform undulations at mound base and suspected that we had chanced upon a buried field of cultivation. It proved comparatively easy to remove by troweling the overlying soil burden of basket-laid sand, due to the sharp contrast in soil texture and color. The operation was successful in uncovering and revealing intact the largest and best-preserved plot of cultivated ground belonging to prehistoric American agriculture. The area of the prehistoric cornfield uncovered was approximately 75 by 50 feet. About half of the mound was left standing, unexcavated, in place over the rest of the field. The included house mound was also troweled out in place over the prehistoric field. Altogether the combined exhibit presents a very compact area of more than ordinary archeological interest.

We have enumerated the basket-laid sand construction of the mound as the fifth stratigraphic element. Sherds and other archeological material were cataloged from the mound materials (5).

Collections from the floor of the included or enveloped house mound constitute another occupation, the sixth (6).

The cultivated field or mound base in this instance forms the seventh (7) catalog level.

Beneath the prehistoric field were found cache pits, some storage pits, and post-hole indications of large square houses, not built on clay platforms as was the house inside Mound D. There were two of these houses beneath the rows of the prehistoric field definitely belonging to a preceding occupation and materials taken from these yield study collections for the eighth level (8).

The ninth (9) and basically oldest stratified collection comes from the weathered loam and fossil soil beneath the house floors and other occupational features previously described under Mound D.

The oldest occupation here yields a heavy predominance of plain, coarse pottery having prepared grit temper but very poorly fired and much eroded from use. Pottery handles with nodal protuberances on rim and handle occur in conjunction with this plain, red or orange-fired pottery. Nodal, small button or teat-like protuberances on lip, rim junction or handle exhibit as many as 30 or more variations. A smaller inclusion of Delta and other classes of early stamping is noted. In the ninth level, the weathered soil zone, only decomposed flint having the highly specialized character for skin dressing and woodworking was found.

Still on the northeast rim of the plateau and within 30 yards of the site of Mound D a small artificial hillock was explored which turned out to be one of the most important discoveries in the Macon Plateau investigations. This was the base of a ceremonial earth lodge of unusual type. It was essentially a circular chamber 42 feet in diameter, covered by an earth shell. Illumination and ventilation, presumably, were provided by a smokehole in the central roof section and a tunnel entrance at least 25 feet long. The walls of the structure were still preserved in basal portions and were shown to be vertical. These were sun-dried or baked. The floor was of a slate-colored river-bed clay, puddled or hard-packed, possibly sun-dried, with a special arrangement of molded seats completely encircling the inner circumference of the room. A few degrees north of the due east azimuth an entrance passage 25 feet long with vertical log walls led into the structure. Clay buttresses or pilasters, U-shaped, projected inward to mark the immediate entrance into the chamber. Directly opposite was a specially prepared raised platform or dais molded in the form of an eagle, exhibiting a wingless body, shoulder, neck, head, beak, and symbolical eye. In the center of the chamber between the eagle platform and the entrance was located a large baked-clay lined pit or hearth.

The ceremonial earth lodge has subsequently been found to be characteristic of ceremonial structures in the older prehistoric phase at Macon, as two more earth lodges have been found. One of these, a small chamber only 25 feet in diameter, was brought out on the west rim of the plateau. This was in much poorer state of preserva-

tion as the floor section was only 5 to 6 inches below the present plowed ground surface and cultivation had effaced many of the important features. The third earth lodge was found in 1936 in archeological reconnaissance of a site located 9 miles away from the Macon Plateau, the Brown's Mount site, which in addition to a very poorly preserved ceremonial earth lodge yielded pottery and other indications of another prehistoric Macon Plateau site.

At present, definite stratigraphic data are not available to show the precise cultural relationship of the Macon ceremonial earth lodge to the rest of the Mound D stratigraphy or to the stratified village site in the same survey. The lodge had been destroyed by deliberate burning and apparently most of the cultural material removed. Over 2,000 specimens of burned wood, mostly pine with a little oak, were studied by students of the Laboratory of Anthropology in making collections for dendrochronological investigation.

It will be impossible within present limits to give even an outline of pertinent data gleaned from the exploration of the prehistoric dugouts on the Macon Plateau. Moreover, the interpretation of the dugouts as to origin and purpose, even now when most of the evidence is in, will almost certainly be the subject of much speculation and controversy.

Certain general conclusions have been accepted on the basis of present findings. These generalizations may be taken as given points in any theoretical explanation.

First, the dugouts were definitely of human origin and were remotely prehistoric.

Second, their extent, orientation, and distribution with reference to the terrain and contours of the Macon Plateau would seem to suggest definite plan or design in conforming them to the then existing topography.

Third, the archeological materials, i. e., flint artifacts and potsherds, cataloged from the five fill levels, give both stratigraphic and typological seriations indicative of cultural evolution or change.

Fourth, the observed conditions of soil eleutriation associated with heavy decomposition of flint seem to be related phenomena, an expression of age conditions much more marked than has hitherto been noted for soil changes in archeological contexts.

Macon Plateau chronology could not be discussed without reference to a remarkable series of prehistoric dugouts uncovered first along the rim of the plateau and the lower contour slopes in conjunction with the exploration of the ceremonial earth lodge just described. The entrance to the ceremonial earth lodge pointed east away from the main summit and body of the plateau, a feature which appeared strange since all of the building activity and occupational features explored previously had been found on the plateau. A general

exploratory trench was cut down slope from the rim of the plateau and the entrance of the earth lodge. This resulted in the uncovering of two series of large pits carved out of the red clay of the plateau. These dugouts were found to run continuously all around the northeast, north, and northwest rim of the plateau from the point at which they were first struck below the ceremonial earth lodge, and also extended around the plateau rim and lower slope in the southeast and south direction, converging upon the site of Mound A, a mile away at the south terminus of the plateau.

Three years have been spent in meticulous profiling and horizontal examination of soil fill in the dugouts. Profile panels made at 2½- or 5-foot intervals, depending on the complexity and change in the fill, showed from 5 to 14 stratified fill elements. These gave on analysis five levels of soil accumulation followed throughout the two series of dugouts, as follows: (1) top recent wash accumulated in the sinks made by the dugouts; (2) a buried sod 14–24 inches below the present surface showing occasionally early nineteenth century European materials and historic Indian pottery; (3) a light tan, weathered loam beneath the buried sod showing a lenticular or meniscus-shaped zonal distribution of soil decomposition extending down into (4), a semi-weathered loam containing nodular, ferrous and manganous oxide precipitates. The basal fill (5) shows a still more nodular formation with veining or streaking of a compact clay magma exhibiting physical change to an extent that the original excavation planes are difficult to make out in cross section. Pottery from this zone was generally so heavily encrusted with iron precipitations as to appear almost limonitic until broken and examined in cross sections. Worked flints showed a mean cortical decomposition of 1.28 mm.

Given so much, discussion has resulted in three general theories to account for the dugouts. A brief statement of each will be made.

The first consideration, the most logical and simple, was to view the Macon dugouts as prehistoric borrow pits or clay quarries from which great quantities of red clay were taken for mound or house construction

A second view has been to regard the dugouts as related in some manner to a scheme of fortification or defense of the plateau summit. The difficulty here is that structural auxiliaries which might be expected in conjunction with fossae have not been found. Moreover, the dugouts do not constitute simply a borrow ditch or fossa but comprise scores of long oval structures separated by narrow partitions of red clay left in place in carving out the plateau, sometimes with narrow passageways indicated in the chain of pits.

A third conception would explain the prehistoric dugouts as an elaborate chain of underground chambers or pit houses. If this view should be accepted, we would be confronted with the existence of a

type of residence and a plan of village organization without specific parallel in American archeology.

Our concern here is simply to note the existence of the prehistoric dugouts and to mention them as one source of data and materials which should be very significant in any ultimate chronological schematization for the older prehistoric occupation on the plateau. Analysis of several thousand study sherds from the basal fill to the prehistoric dugouts shows one of the most homogeneous pottery aggregates found in any archeological context in the Ocmulgee Basin. About 92 percent of all the sherds are plain, very coarse, grit-tempered, red and orange colored from overfiring, and characteristically roughened and worn from attrition or use. A smaller percentage of pottery, amounting to 2 or 3 percent, shows some very primitive ware evidently built up inside of nets or baskets. One characteristic form is a large pottery pan about the size and shape of a wooden dough mixer, showing heavy netting impressions covering all of the pot except for an area of several inches below the rim. Others show various types of basketry and weaving impressions. Several specialized rim sections show evidence that these were built up inside basketry containers rather than decorated subsequently with fabric-impressed stamps.

Finally it is significant that we do find a small percentage of the early stamped wares in the lowest levels of fill to the prehistoric dugouts. Moreover, domestic pits and definite occupation levels explored in situ, underneath the mound over the earth lodge, show the same pottery as that found in the prehistoric dugouts in conjunction with Delta pottery and other crudely stamped sherds. This description must serve to show a portion of the evidence on the basis of stratigraphy and typology definitely implying existence of a developed stamp ware in the oldest prehistoric levels at Macon in association with evidences of early agriculture and very primitive types of dwelling.

The Mound-Building Period on the Macon Plateau

It must be realized that the oldest prehistoric phases of cultural development in the Ocmulgee Basin are the most obscure and difficult to interpret. Despite the protracted and intensive investigations carried on much doubt still exists in regard to some very important points concerning the local chronology so far as the basic pottery substratum is concerned.

The evidence is not complete, but there are indications on both stratigraphic and typological grounds that the Macon mounds represent a later phase of prehistoric development on the Macon Plateau. The deep-lying occupational features on top of the plateau, including both series of prehistoric dugouts, the stratified village remains near Mound D, and house-building indications uncovered beneath Mound

D, suggest an earlier habitation of the plateau before any mounds were built.

However, present tentative studies of comparative pottery morphology while serving to give some distinction do not completely separate the cultural indices of these levels from strata box collections made in the cataloging of materials in mound exploration on the plateau.

The most likely explanation is that we have a cultural continuum with new trait complexes coming toward the end of a long period of internal development. It is quite possible that the mound building on the Macon Plateau comes in as a culmination of civilizational processes taking place in the area. Minor stylistic variation in pottery and artifacts would hardly be noticed in any casual or preliminary laboratory study. The impression has been growing steadily over a 4-year period as various information accumulated that the mounds were built later but there has been nothing definite to imply the necessity of bringing in new tribal elements or any radically different cultural infusion. There is evidence of increasing influence of trait activities from the outside as indicated by the emergence of new pottery complexes and the stronger occurrence of some of the older stamped wares previously met with in the deepest archeological levels on the plateau.

A brief summary of site exploration and a statement of the tentatively perceived chronological trend will follow:

Mound C of the Macon group was one of the first to be explored under C. W. A. organization. This mound, a large conical truncate, had been partially destroyed by steam-shovel excavations in cutting the right-of-way of the Central of Georgia Railway. The remaining half of the mound stood as a shell, crescentic in shape where the shovels had taken proportionately greater materials from the central portion of the mound. The exposed north face of the cut showed the presence of several superimposed clay platforms mantling basket-laid sand belonging to separate periods of mound building. The possibilities of stratigraphy led to the early investigation of the mound.

The method employed at Mound C was to make vertical profile cross sections through the remaining portions of the mound and through the slump or talus material accumulating in the railroad cut. It was necessary to make two jogs back into the mound in order to profile original mound structure and clear away all talus. This operation finally gave a complete cross-sectional picture of the history of the mound construction. It became apparent that Mound C proper really consisted of five distinct units of mound construction, superimposed, flat-topped, conical truncates, each succeeding mound built upon a predecessor. In all cases the bodies of the mounds were basket-laid sand capped with thick clay. The clay caps exhibited a marked selection of clay as to color and texture, and the same

materials extended from the mound summits as streamers or slope mantles. The profile panels yielded one of the most striking exhibits of composite mound structure known to southeastern archeology. The selection of clays and sands of many colors and the schematic arrangement of these in the successive periods of mound building presented an ensemble effect of unusual complexity and color contrast.

In addition to the architectural peculiarities of Mound C construction, other points of archeological interest related to the presence of burial pits made in each period of construction. The first or core mound had six tomb burials underneath its base. The tombs consisted of large burial pits 9 to 10 feet long and 4 to 6 feet wide in which were log crypts containing both single and multiple burials. In several instances there were evidences that the tombs were lined with bark or small saplings. The use of shell ornaments, bone artifacts, both shell and bone beads as burial furniture, was a feature of these submound interments. Also anatomical evidence that decomposed flesh had been partially stripped from the bones and that piecemeal disarticulation of the appendicular skeleton had been made in careful preparation for inhumation. The arrangement of the bodies in multiple burials and the occasional wrapping of individual burials in hide or bark before placing them in the log tomb implied an elaborate burial ceremonial.

The first or core mound at Mound C was also characterized by another unusual feature, that of a clay-molded stairway, consisting of 14 stairs 6 feet wide rising from the ground level to the mound summit of slate-colored river-bed clay. The stairway had very definitely molded stairs showing worn median portions from the treading of feet. The use of clay in stair construction instead of logs is exceptional.

Other burial pits were found intrusive through the clay summit of succeeding mound constructions or through the outwash slopes of water-laid sand and clay accumulating on the shoulders of the several mounds. In some instances these burial pits had slumped or faulted and the presence of water-laid sand both over and below the point of insertion implied inhumation carried out during the actual period of construction. Pottery and artifacts taken from the mound soils and found associated with the burials helped to show a cultural continuity in the history of Mound C construction.

Each clay summit had intrusive post molds and an organic black soil accumulation indicating building activity.

The final or fifth mound slope had developed a sod into which Indian burials had been made intrusively. Beads, pipes, and other European artifacts found associated with these historic burials were tentatively dated by experts as of late seventeenth century.

In addition to the intrusive historic burials in the south and east slopes of Mound C, a village site was explored in the terrain located

immediately around the mound. More burials, house indications, and numerous domestic pits were uncovered. Pottery and flint artifacts showed ware and decorative features not found with burials inside the composite mound.

Mound C burials in the first and second periods of mound construction had shown a special type of burial urn; small pottery vessels with long, slender necks and constricted mouths opening laterally, with modeled, conventionalized animal eyes and ears around the mouth. The shape, conventionalized animal modeling, and surface finish of these vessels indicated a prehistoric funerary ware which did not occur in the village outside Mound C.

The village at Mound C appeared to have both an historic and a proto-historic phase. Pottery was predominantly plain or incised. Morphological considerations showed relationship to intrusive burials and domestic pits previously encountered in the top levels of the stratified village at Mound D and the intrusive pits made into the slopes of Mound D. A negative feature, later to become significant, was the almost complete absence of stamped or paddle-marked pottery in the Mound C site complex.

McDougald Mound was explored late in 1936. This mound is located on a projecting spur about 500 yards northwest of Mound A, separated from the rest of the Macon Plateau by a deep ravine. Topographically McDougald is considered one of the Macon group of mounds.

Here again over three-fifths of the mound had been scraped away by road contractors borrowing dirt for the construction of the Macon-Dublin-Savannah Highway. Systematic profiling through talus and remaining basal portions of the mound succeeded in uncovering some very valuable information regarding mound architecture on the Macon Plateau.

The pen sketch by James A. Jackson made during an advanced stage of exploration at McDougald summarizes the essential structural features of this mound. The point of greatest interest relates to the apparently deliberate construction of a mound shell or protective mantle over the site of a smaller house mound. The analysis of successive vertical profile planes shows how neatly the clay plating of the mound shell coincides with the clay ramps of the included house mound. Also it is interesting to note how the floor level of the included house mound was extended on one side by filling in soil to provide a level base portion on which to begin the construction of the containing mound.

The house construction built on the platform at McDougald shows a striking convergence in rectangular shaped arrangement of vertical wall supports, the existence of galleries or veranda-like extensions at

the end, fired-clay basins, specially prepared floor with the house site uncovered beneath Mound D previously described.

It will be noted that this house was not burned but was apparently covered over with basket-laid sand. Then the whole enveloping sand mound was specially plated with thick red clay.

The sequence of events here recalls the structural features noted in the analysis of mound stratigraphy at Mound D. And the suggestion is made hypothetically that McDougald is representative of a class of mound constructions in the Ocmulgee Basin in which there appears to be deliberate intent to construct special mound shells over house sites having specific ceremonial significance. The idea is that these mound constructions serve a different purpose functionally and that from an archeological point of view they may be isolated as a structural group from other classes of mound construction more definitely undertaken for burial purposes or for pyramidal temple seats. The suggestion is offered that the McDougald Mound classification be considered as commemorative.

Another mound in the Macon group, explored subsequent to the McDougald investigations, uncovered a similar situation to that seen in McDougald. This mound, the Dunlap Mound, located to the east of the Macon Plateau, exhibited a contained house platform and several ramped terrace approaches mantled with red clay. Dunlap represents a variant of the situation described at McDougald.

Pottery from both of these mounds shows a predominance of the plain red or orange fired ware, very coarse tempered with prepared grit, and is like the basic ware generally found in the older plateau levels.

Prehistoric Spring Sites on the Middle Plateau

The central section of the Macon Plateau has in recent years been isolated by two railroad cuts from the north and south terminal spurs. The segment thus cut off has generally been referred to as the Middle Macon Plateau. Exploration here gives data comparable to results obtained on the north (Mound D) plateau incident to the further investigation of prehistoric dugouts around the rim and lower slope of the plateau; also several spring sites at the foot of the southern slopes which have shown signs of prehistoric use.

There were at least four springs issuing from the foot of the plateau at a prehistoric period. Subsequently, changes in the water table and a marked increase in erosion have led to the encroachment of the marsh. As a result the springs have been choked up and only one has been active in recent years.

In addition to the spring sites at the foot of the plateau, general trench exploration from the rim down slope to the lowland marsh has been made in several instances. These follow the contour intervals of the southern and southeastern slopes which converge upon the

large pyramidal mound, Mound A, of the Macon group, in the south end of the plateau.

Summarizing, explorations on the Middle Plateau were undertaken to investigate the evidences of artificial terraces, the dugout continuities followed south from the point at which they were first found in front of the ceremonial earth lodge in the northeast quadrant of the plateau, and the choked spring sites at the foot of the slope. Also on top of the plateau an ancient spring source was uncovered in general trench exploration. This evidently had been led off the plateau by a ditch which was traced out in its entirety by vertical profiling of fill at 5-foot intervals. Pottery found in the lower levels of fill to this prehistoric spring and drainage ditch on top of the plateau shows a very high percentage of the older plateau ware described for the prehistoric dugouts and in other situations known on stratigraphic grounds to belong to the earlier pottery levels on the plateau.

The prehistoric dugouts were traced in the Middle Plateau along the rim and lower slopes and found to dip down toward the largest of the prehistoric springs. This spring site was found to have cut back 20 feet into the plateau bluff intercepting one series of the dugouts. The same profile features of weathered nodular soil fill and the same pottery encrusted with ferruginous and manganous precipitations were encountered in the basal deposits of these dugouts.

Explorations at Mounds A and B, Macon Group

Mound A is the large pyramidal truncate, originally 40 feet high and over 300 feet wide at the base, which dominates the Macon group and makes satellite structures of the remaining mounds. Mound B is located approximately 100 feet north and west of Mound A. Both mounds had been constructed on a narrow projecting spur of the south plateau. Preliminary exploratory trenches cut through the plateau between the two mounds have yielded evidence to the effect that the tongue-like south terminal spur of the plateau was not large enough to accommodate the construction of the two mounds. It became necessary, therefore, to make extensive fills of basket-laid sand and clay to extend the building surface. There is very definite evidence accumulating at present that this filling process went on for some time and that each successive fill was bonded or held in place by the device of plating loose friable sand with heavy bands or streamers of river-bed clay. The structural principle was the same as that employed in the clay mantling of mounds noted in foregoing discussions.

There is evidence also that superimposed house floors have been built over water-laid sand which extends out onto the wash from the slopes of earlier periods of mound construction. The superimposed houses in the upper levels of the plateau between the two mounds are shown stratigraphically to belong to the period of mound construction.

Pottery and other collections of artifacts cataloged from these levels are therefore representative of that period.

In the fossil soils preserved under Mound A and in the weathered loam explored beneath the 9 feet of stratified fill between the two mounds, deeper troweling was carried out. The old plateau floor here showed a typical weathered profile development with A and B soil horizons familiar to geomorphologists and soil scientists.

Four arbitrary levels, each 12 inches thick, were recognized in cataloging flints and pottery. Again the same phenomena of distribution were observed that had been previously noted in special excavations on the Middle and North (Mound D) Plateau sections.

Pottery and flint occurred in equal proportions in the first 12-inch level. In the second 12 inches potsherds occurred sporadically and were diminishing perceptibly. Cataloged flint continued to show numerical strength extending into the third zone. The fourth 12 inches was relatively unmodified red clay loam and was sterile except for a few rotten flints. Pottery occurred in the 24–40-inch level only in association with post holes or pit disturbances. Chronometric flint studies made by Dean Leon P. Smith, of Wesleyan College, showed 100 percent increase in measured decomposition of worked flint in the third soil zone.

On the other hand, excavation of general exploratory trenches carried down to the old plateau level shows heavy occupation before mound-building activities had taken place. Very thick midden and pottery accumulations here have definite stratigraphic implications for the earlier chronology of the Macon Plateau. Complexity of manifold building features and stratified layers in such a concentrated area requires the most meticulous methods in profiling, horizontal exploration of floors, and cataloging of materials. The work is still in progress and data accumulating has not been analyzed thoroughly. Any statement of progress should include reference to the 9 feet of stratified fill being profiled in the area between Mounds A and B. Here there is promise of still more significant information bearing on the earlier cultural history of the Macon Plateau.

Another important conclusion relates to the indications that the slopes of the Macon Plateau in the south terminal portion had been generally cut away to provide soil for mound construction at an earlier period. At a later time when the mounds were expanded in size and the plateau was found not to accommodate the building expansion it became necessary to fill the excavated slopes and to project the building surface laterally.

Several lines of evidence suggest that these explorations occurred at a later period from that represented by the dugout excavations in the central and southern plateau sections. For one thing, the dugouts do not have the pit-like character or shape which they have elsewhere

on the plateau. Again, the soil in the prehistoric excavations retains its structural integrity as to color, texture, and mechanical lie or position (basket-laid, lensed, water-laid, cross-bedded). There is no process of soil leaching or weathering apparent in the fill to dugouts in the south plateau section around Mounds A and B, whereas the dugouts in central and northern plateau periphery show normal profile developments and nodular soil accumulations in situ which competent soil scientists have pronounced to have occurred after the soil accumulated in the dugouts. If this be true, the almost certain weathering and nodular soil formation must be considered conditions of age sufficiently operative to indicate that the plateau slopes at Mounds A and B were cut away incident to mound construction and subsequently refilled as the mound-building program advanced to a more ambitious stage. The assumption implicit in these observations is that the prehistoric dugouts do not have the same character nor probably the same purpose, and are not of the same age in the southern terminal portions of the plateau.

Moreover, pottery cataloged and described as finds on house floors, in midden pockets, in pits, and in the general fill stratigraphically considered, in the 9-foot level between Mounds A and B shows the emergence of new types of pottery not previously encountered and also a heavier percentage of distribution of certain stamped wares which were not noted in the first 2 years of exploration in the central and northern plateau surveys.

In electing to make a tentative chronological summary and statement of progress covering site exploration to date in the Ocmulgee Basin, beginning with Macon Plateau, necessarily the most obscure and difficult problems have been tackled first. There are indications that the elucidation of these problems will come in large measure from explorations still in progress, particularly in the south plateau sector where Mounds A and B and the 9-foot level are being systematically profiled.

Certain definite tendencies in regard to older habitation levels on the Macon Plateau have consistently been apparent over a 4-year period. These may be briefly summarized as follows:

The prehistoric dugouts constitute a major structural feature of the plateau, completely encircling the topographic area except for the west slopes where the fill mantling and erosion have been proven to be most extensive in the last three or four hundred years. The pottery from the prehistoric dugouts yielded 92 percent of a primitive, coarse, plain, grit-tempered ware exhibiting considerable homogeneity in contrast to pottery collections coming from other contexts on the plateau. In addition to the fundamental plain Macon ware, whose ware and paste characteristics define it and distinguish it from all the decorative classes, there is a small percentage of other sherd classes

which show primitive pottery making. We have noted a small but striking percentage of pottery vessels which apparently were built up inside of nets or baskets. Also a series of very thick-walled pottery cylinders or jars with footed or annular bases. The thickness of these coarse, grit-tempered cylinder jars often approximates 1 inch.

Finally, there is a very small percentage of early stamped decorated ware in the basal deposits of dugouts, showing that stamping was contemporaneous with, or quite possibly antedated, the fundamental plain ware of the plateau.

The description of the site exploration on the plateau then proceeded to outline investigations of house sites and other habitation indications on top of the plateau enclosed by the prehistoric dugouts. Exploration is not yet complete but the field data show that the oldest habitation levels appear regularly enclosed by the inner series of dugouts. Inside the prehistoric continuity which runs along the plateau rim a rich brown or chocolate-colored loam containing much midden and showing some leaching has been found widely distributed. But between the inner dugout continuity and the outer encompassing series of dugouts following the lower contour slopes of the plates there is a notable decrease in habitation signs as indicated by house sites, domestic pits, burials, or basins. Also strata boxes show a marked decrease of materials from the surface between the dugout series. Finally, the profile panels show changes of soil texture, modifying from the rich chocolate of the older habitation site inside the inner series to an orange or reddish sandy loam much weathered and showing characteristic soil profile developments in the plateau slopes, outside the inner series of dugouts, extending down slope where sand mantles and soil creep of redistributed origin give the lie of the land.

The stratified village site in the North Plateau, with reference to Mound D explorations, was described as a profiled section through the older enclosed superimposed habitation levels.

The presence of considerable Delta class stamped ware in the lowest pottery level in the stratified village site is regarded as significant. This stamped ware is a definite pottery complex, technologically advanced with very sophisticated design elements. Its presence in the oldest stratified levels of the plateau implies a much greater antiquity in stamped pottery in the area than had been anticipated.

The exploration of the prehistoric spring sites, particularly the one which issued from a spring head uncovered on top of the plateau and the stratified fill to this spring site, yielded the fundamental plain ware of the Macon Plateau, thus substantiating conclusions previously arrived at for the North Plateau. Moreover, the exploration of prehistoric dugouts in the Middle Plateau survey confirms implications received in the protracted investigations of the same structures around Mound D.

The final stage of exploration on the Macon Plateau is now centered in extensive trenching of the area between Mounds A and B. These mounds were constructed in successive stages on the small south projecting spur or tongue of the plateau. The manner in which the plateau was built out with basket-laid sand and plated with clay streamers to provide an extended building platform has been described. Indications that a portion of the plateau slope had been carved out to provide borrow dirt for mound building were noted. Later these extensive excavations were refilled incident to the final period of mound construction. The absence of soil profile developments and the marked persistence of original soil features in the fill to these prehistoric excavations at Mounds A and B contrasted with the normal profile developments recorded for fill in the dugouts elsewhere on the plateau.

Finally, it was found, in beginning cataloging of materials in the 9-foot level between Mounds A and B, that new pottery classes were met with and that increasing percentages of some of the earlier stamps were noted in daily handling of materials taken from the different soil levels. The correlation of these typologically distinguished sherds with successive or superimposed house levels has not been determined, as the work of horizontal stripping is still in progress. Moreover, the precise relationship of the building activities on the superimposed platforms to the structures of the mounds must be meticulously recorded by successive analysis of profile panels made through the whole area. It is apparent that special mound plating or outwash sheets of water-laid sand occur over and below the floors of houses built between the mounds. Approximately 2 acres of ground comprising the sites of mounds and the intervening area thus represent the crux in very concentrated form of Macon Plateau chronology. The outlook here for clarification of many problems regarding the early pottery phases on the Macon Plateau is very promising.

It is important to remark that extended exploration and reconnaissance, carried on intensively in a relatively restricted territory, indicate a cultural hiatus implying possible discontinuity as between the older prehistoric sites on the Macon Plateau and other site manifestations in the Ocmulgee Basin, with the one exception of the Brown's Mount site which will be considered now. Persistent investigations have failed to indicate how complete or how prolonged this hiatus might be. It may well be that the apparent discontinuity is not real but comes simply from negative evidence or absence of contact in the particular sites explored.

Archeological Reconnaissance of Brown's Mount

The most prominent topographic feature of the Ocmulgee plain is a large erosional remnant of limestone and red clay located 6½ miles

southeast of Macon overlooking the east bank of the Ocmulgee River. Brown's Mount comprises an area of approximately 1 square mile, comparable with the extent of Macon Plateau. The summit is rounded, shelving gently to the plain on the northeast, with more precipitous approaches on the other sides. In the main, good purchase is afforded by topography for habitation over most of the top. The maximum elevation above the river plain is 180 feet.

In 1935 and 1936 archeological reconnaissance began with collection of surface flints and potsherds with notations made on indications of house sites and other structural features. A circular mass of red clay showing in a freshly plowed field on a small hummocky rise led to the only intensive excavation made during 1936. This proved to be a ceremonial earth lodge similar to the one uncovered on the Macon Plateau. The remaining portion of the structure was in poor state of preservation.

The following identifying features were worked out in the ceremonial earth lodge at Brown's Mount: a specially prepared floor of yellow river clay, a wall section of thickly massed red clay used as plating to retain sand fillers, a central hearth or fire with baked-clay lining, molded-clay seats arranged as a tier around the inner wall periphery. The four large supporting timbers set equidistant from the central fire which supported the roof stress in the Macon Plateau structure were not evident at Brown's Mount. Nor were there any assured traces of the clay molded platform or dais made in eagle form. The entrance or tunnel passage was intact for a distance of over 10 feet, with charred pine wall posts in place. Again, the orientation of the entrance passage to the east was observed, although at Brown's Mount the azimuth was directed a few degrees north of due east instead of south of east as in the plan of the original ceremonial lodge discovery on the Macon Plateau. Negative evidence from absence of features at Brown's Mount may not be significant of architectural evolution or variation, as destruction of the earth chamber by erosion and deep plowing in breaking new ground might have erased or modified some structural indications beyond recognition.

Surface collections and general trench exploration on the summit of Brown's Mount yield a study collection of 2,000 sherds which in preliminary analysis were found to be practically identical with pottery taken from the basal fill or floor deposits of the prehistoric dugouts on the Macon Plateau. The majority of Brown's Mount ware was very coarse, grit-tempered, red to orange-fired in color, with a small percentage of sherds indicating heavy, thick cylindridal jars and other vessels built up inside of nets or baskets. The proportion of stamped ware was less than 1 percent, smaller even than on the Macon Plateau. Absence of incised pottery, denticulate stamps, and painted pottery was noted. Numerous crudely molded animal-head effigies used as

pottery rim decoration, an outstanding peculiarity of early Macon ware, were also found in general trench exploration at Brown's Mount. The owl's-head effigy rim modeling was seen to predominate again in this pottery class and it was remarked that there was some slight stylistic change, one of several minor points which might imply an earlier or later temporal variation from the Macon Plateau phase.

In the 10-acre open field in which the Brown's Mount ceremonial earth lodge was uncovered were found surface indications of small, slightly sunken areas containing a different type of soil than was found in the surrounding ground. The absence of erosional scars or drainage outlets and the grouping of these sinks was considerably suggestive of filled dugouts. Exploration on this point to check against the situation discovered on Macon Plateau has not yet been undertaken.

Local sources are authority for the description of a rock terrace or wall which enclosed a 60-acre tract on top of Brown's Mount, opening down to a large spring site.[5] The rocks have subsequently been removed by a railroad for use in riprapping a bridgehead on the Ocmulgee. The descriptions imply the use of the rock and earth enclosures as part of an aboriginal scheme of fortification. Exploration to afford archeological indications of this theory have not been carried out to date. Brown's Mount, on the basis of existing data, is strongly indicated to be related to the earlier prehistoric horizon at Macon Plateau.

In fact, the apparent absence of complicating superimposition of cultural remains at Brown's Mount might simplify site checking on many of the problems uncovered at Macon Plateau. It is worthy of note that preliminary survey and reconnaissance have shown only two sites, Macon Plateau and Brown's Mount, as representative of the older prehistoric level in central Georgia.

Swift Creek and the Evolution of Stamped Ware

The Swift Creek Mound and village site is located on the east side of the Ocmulgee about 3 miles southeast of the Macon Plateau and 1 mile from the Lamar Mound and village site on the same side of the river. The Swift Creek site is on property belonging to the county farm and has been under cultivation for some time. The terrain is broken and hummocky at a point where the east river terrace begins to emerge from the marshy outliers of the flood plain. Cultivation has served to render ambiguous the uneven character of the topography and uncertainty has been increased by the presence of numerous small

[5] C. C. Jones, Antiquities of the Southern Indians, New York, 1873, p. 163. Elsewhere in the same work Jones notes similar structures located at various points in the Georgia piedmont. These have never been checked by archeological survey. At Fort Mountain State Park, near Dalton, Ga., a hilltop area is encircled by an artificial rock wall having the general features described by Jones as aboriginal fortifications. Ladd Mountain, overlooking the Etowah mound site near Cartersville, Ga., has a similar rock wall visited in 1936 by a group of Laboratory of Anthropology (Santa Fe) students led by the present writer.

rounded clay knobs, erosional remnants which simulate the configuration of mounds very strikingly. Inasmuch as several of these small natural eminences have been proven to have been used as refuge stations and camp sites by aborigines the difficulties of ascertaining deliberate construction were increased.[6]

However, one very definite mound construction, Mound A of the Swift Creek group, was extensively explored. This mound was cut into quadrants by intersecting cross trenches and further profiled in vertical sections by offsets made at 2½- or 5-foot intervals. The mound originally must have been more than 10 feet high but deep plowing and borrowing of dirt for road building has planed off considerable soil from the top and slopes. The shape of the mound was approximately round to round oval with a diameter or longitudinal axis approximating 200 feet.

The typical profile through the median plane shows features of construction not previously met with in the Ocmulgee Basin. It is evident that Mound A of the Swift Creek group belongs to a different category from other mounds described in the area.

Concisely, Mound A at Swift Creek exhibits in profile a picture of gradually accumulating hummocks, evidently filled in during the initial stages without any plan of eventual construction. In the beginning, efforts were directed toward the filling in of low-lying inequalities in the village level and the construction of slight elevations which served as refuge stations or as very inconsequential building sites. Later the intervening troughs were filled in to broaden the area lived upon. There are some slight evidences of post molds and other indications of house building. By and large it appears that the soil accumulation came out of efforts to fill in gradually the area and to provide slight elevation of temporary residence. In the end it may be that the enveloping heap took on more and more the appearance of a mound and that the purely occupational and structural growth might have become more deliberate with an eye to the building of a mound. If so, analysis of profile features in the different levels of growth does not convey any very definite impression as to the precise level at which formal mound building became a deliberate objective. I have offered the suggestion that Mound A of the Swift Creek group represents a type of mound which might be considered

[6] Exploration by students of the Laboratory of Anthropology (Santa Fe) during July 1936 of a small "mound" in the Adkin's pasture, 300 yards south of the Swift Creek site, is an example in point. This structure profiled showed weathered tan loam extending into slightly modified natural "calico clay" of Eocene formation. No definite midden layers or "occupation levels" could be made out but the concentration of worked flint, including many finished artifacts, in conjunction with scattered sherds, implied continuous dropping of cultural materials in situ. The peculiar "occupational" accretion of cultural materials is also strikingly illustrated in the Tufts Spring site, on the west side of the Ocmulgee opposite Swift Creek (explored in August-September 1937). Here very black midden was mounded over a small rise in the river margin. Scattered pottery, numerous flint artifacts, bone, and shell occurred in the accumulation. Potsherds were confined to the top 12 inches of the midden and showed an early period of Swift Creek development. The "potteryless" horizon in the substratum extended down approximately 2 feet in places.

as occupational in contrast to the mound structures (Mounds A, B, C, D, McDougald, and Dunlap of the Macon group) which are either temple seats or were built to commemorate, as earth monuments, the site of ceremonial buildings. In any event the mounds in the Ocmulgee Basin were undertaken with a definite plan of construction in view and cross-sectional profile panels show that the entire structure breaks down into units implying consistent conception of design from mound base to mound plate. At Swift Creek, Mound A, we have a mushroom growth by accretion of soils apparently accumulated by indirection which in final form gives a definite organic grayish or black soil appearance when profiled. The intervening soils between the sod and midden accumulations were composed of basket-laid sand and midden of lighter color. Interbedded wood ash occurs frequently. These soils contain large collections of pottery and artifacts and appear to have been brought in by basket loads from the neighboring village site.

In working out the stratigraphic succession, it was found that there were six buried sod levels containing midden which appeared to run more or less continuously through the whole mound and thus represented consistent habitation levels which could be followed from one profile plane to another in horizontal stripping. Ultimately pottery from each of these six levels was taken for stratigraphic study and analyzed for typological distribution.

The typological studies undertaken on the stratigraphic basis just indicated show clearly an evolution of stamped pottery on the site. The statistical study of comparative pottery morphology from the seven levels has resulted in a mass of data and graphs which cannot be given in detail here.[7] At present an outline of the general conclusions will be presented. Three important generalizations should be made at the outset in regard to the character of Swift Creek pottery.

First, Swift Creek stamped ware is predominantly curvilinear in design. The actual percentage for the total number of sherds studied from the mound is approximately 99 percent. This statement is not to exclude linear elements which enter into elaborate composite designs in the form of bars or rays.

Second, there is a perceptible although gradual improvement in both paste characteristics and design execution. The change becomes apparent in the third occupation level, is still more evident in the fourth or fifth, and may be considered to culminate either in the fifth or sixth levels.

Third, close observation revealed that a distinctive stamped ware appeared in the third level. This type was called Swift Creek, class A complicated stamp. The remarkable perfection in technique, both from the point of view of precision with which the stamp was cut and

[7] Six occupation levels and the submound or premound level which also yielded material.

the care with which the impression was made, established this pottery as a definite decorative complex within the series. Class A stamp increases sufficiently in the upper levels to give statistical validity to the claims made for it on a typological basis. The actual percentage in the topmost, sixth, occupation drops slightly, but this discrepancy is ascribed to the fact that the summit of the mound had been cut away to provide borrow dirt for road construction.

Present studies indicate a development of complicated stamped design running through three distinct phases. There is an Early stage characterized by the presence of naturalistic patterns, simple and combined curvilinear compositions, poorer paste and less favorable decorative finish, less precise cutting of stamps, and in general a relatively inferior ware. This relative qualification applies only to the Swift Creek site series as even Early Swift Creek is superior to other stamped wares in the Ocmulgee Basin with the exception of Delta pottery. In the Middle stage of development class A stamp arises and undergoes a swift but bewildering transformation, producing elaborate composite patterns combining both curvilinear and linear motifs in a very sophisticated manner. The stamped designs are impressed with die-like precision. The designs themselves, although very intricate, are beautifully proportioned and restrained in execution. In this stage, pottery stamping, regarded both from technological and artistic standards, attains its evolutionary peak. It is probable, judging from personal observation of stamped pottery collections elsewhere in Georgia and the Southeast, that the Middle stage of Swift Creek marks a culmination of the art of pottery stamping for the whole area.

In the Late stage class A complicated stamp grows larger and more exaggerated, loses balance in composition, and in general becomes caricature of the earlier patterns. This stage of development at Swift Creek is not represented in pottery seriations from the mound proper. The material from the sixth occupation is definitely Middle Swift Creek. It is probable, however, that a change had taken place in the final period of mound occupation because the surrounding village site yields a significant percentage of this flamboyant stamp. Incident to borrowing and plowing, the likelihood is that a good proportion of the material originally in the top of the mound was redistributed over the village midden accumulations. One example of the decadent stylistic trend observed in the village, but not in the mound, is the presence of grotesque "tear drop" or "snowshoe" motifs, barred or rayed horizontally. In the plowed ground around the mound these are exaggerated in size and show a perceptible loss of balance in composition. Yet strangely enough the die-like precision of the stamped impressions is retained.

Immediately in the Macon area other site manifestations of late Swift Creek have not been found to date. Further removed in the

Ocmulgee Basin and elsewhere in the State, surface collections have indicated a more widespread diffusion. An outstanding site is the large mound and village site, Kolomoki, in Early County, near Blakely in southwest Georgia, located on Kolomoki Creek, a small stream running into the lower Chattahoochee. Preliminary study of Kolomoki collections belonging to the Society for Georgia Archaeology made available by Dr. C. C. Harrold, president of the society, reveals a heavy percentage of late Swift Creek designs. Nearer Macon, 40 miles south at the juncture of Big Indian Creek with the Ocmulgee, surface collections have disclosed a Late Swift Creek site on which the pottery exhibits the same highly specialized rims found with Swift Creek ware at Kolomoki. Preston Holder, conducting archeological explorations at the Evelyn Plantation site near Brunswick on the Georgia coast, recognizes Late Swift Creek components. These instances serve to strengthen impressions received from the Macon investigations. The comparative absence of Late Swift Creek components in the intensively explored area at Macon is significant. The chronological implications of this fact will receive more detailed attention later in the text.

Only a brief statement will be made at present concerning the classification of Swift Creek designs. It has already been observed that these are predominantly curvilinear. The patterns in the lower mound levels have a tendency to be either simple curvilinear or to be combinations of these simple elements: circles, ovals, almond-shapes, lozenges, lobate forms are recurrent. In Early Swift Creek are also found conventionalized symbols—six-pointed stars, cosmic circles, "Maltese crosses," the lyre, and forms which might be suggestive of plant life. These symbolical representations disappear in the upper occupations. On the other hand, many of the early patterns persist throughout the series in simple or elaborated form. While class A stamp is characterized by unusually intricate and sophisticated patterns, nevertheless the original simple curvilinear motifs of the early period continue to be executed in the new evolutionary style.

The plain ware at Swift Creek, as might be expected, is not so helpful in marking the type site. There are distinguishing characteristics, however, which have some validity in defining Swift Creek plain from the undecorated wares of other horizons. The main difficulty lies in separating Swift Creek plain from Macon Plateau plain. Swift Creek plain in general is very hard, tenacious, uniformly grit or sand tempered with very homogeneous paste structure regarded in cross section, usually having a grayish to tawny yellow color from firing. On the Macon Plateau, in the deepest levels, have been found quantities of a rough, coarse, grit-tempered or sand-tempered pottery, generally red to orange red in color. There is some question in regard to color on the Plateau as the ferruginous soils may produce a color change not

recorded in most Swift Creek collections as these latter sites tend to be located on lower river terraces where a blacker and sandier soil formation is found as the matrix. However, there seem to be rim specializations and indicated vessel shapes in the two series which will aid in identification. Also in the upper Plateau occupations red grit-tempered ware is replaced by vegetal, shell, or "muck" temper.

In addition to the evolutionary series of stamped pottery at Swift Creek mention should be made of several new pottery complexes. These are characteristic, have specific occurrence on Swift Creek sites, and thus have great value as "site markers" in central Georgia.

First of all is the vegetal or "fiber-tempered" ware. Initially this was referred to as "grass-tempered ware," the inference being that a type of "wire grass" growing on upper and middle coastal plain "crawfish" soils was used for tempering. Later the possibilities of palmetto fiber, moss, and pine needles were considered and consultation with other investigators in the area led to a general agreement that the term "fiber-tempered" was better. Paste, firing, color, and surface finish, as well as temper, help to define this pottery complex. Surface character particularly is important as the extruded vegetal fiber makes characteristic impressions incident to the smoothing of the paste before firing, producing a vermiculated appearance.

A second vagrant pottery complex present at Swift Creek, and also widely distributed in Georgia, is the checker stamp or grid-bar decoration. Generically, this class of pottery decoration suggests evolutionary modifications with itself as many sherds of this group found in lower deposits have a denticulate appearance suggesting the use of a rocker stamp or some sort of rouletting. On occasion it has been thought that the checker stamps appear to imitate in carved wooden paddle impressions the simple netting stamps found on Macon Plateau pottery. This hypothesis has no proof, however, and is purely speculative. Grid bar or checker stamp has a wide distribution in the Ocmulgee Basin, occurring on both Swift Creek and Macon Plateau sites. There are some indications that the checker stamp might have persisted into later horizons. As in the case of fiber-tempered ware, there are no pure sites of this pottery in the Ocmulgee, but data from reconnaissance on the Georgia coast and elsewhere in the upper piedmont of Georgia show heavier accumulations there.

Another important class of early stamped pottery in the Ocmulgee Basin, occurring sporadically at Swift Creek and on the Macon Plateau, is a simple linear, sometimes crisscross, grooved decoration. The most logical explanation is that of a linear grooved paddle, very crudely cut, in which the paddle is slapped irregularly over the decorative surface of the pottery vessel. One complete pot cataloged from Swift Creek shows the linear stamped depressions running in wide sweeping curves from the conoidal base to terminate at or near

the rim. In this case the use of a large rocker or carved wooden cylinder rather than the paddle is suggested. Laboratory experiments have shown that such simple linear decorations can be reproduced by using a wooden roller, a round stick or broom handle, which has certain roots or untwisted fibers wound round it. This type of linear stamp occurs frequently in small percentages on many sites in central Georgia. It comes out in Macon Plateau, less strongly at Swift Creek, but increasingly on several Late Swift Creek sites. Reconnaissance has revealed pure sites along the Oconee, 40 miles north of the Ocmulgee area. This stamp, tentatively regarded as early in the Ocmulgee chronology, has been a "rider" on so many sites whose cultural affinities or temporal span had not been determined that a noncommittal appellation was used in referring to it—it has been called "Sigma Class" stamped ware in beginning laboratory studies. With increasing knowledge, however, and the assurance that we are dealing with a definitive pottery complex belonging to the central Georgia area, opinion has developed to the effect that a binomial nomenclature might be advantageously applied. Utilizing the name of a site on which such pottery appears to be "pure", I have decided to call this complex "Vining simple" stamp.[8]

An important class of vessels, not related to pottery, is the stoneware in the Swift Creek complex. These, judging from a number of large cataloged pieces, are bowl-shaped containers hewn from steatite or soapstone. Steatite ware appears to be correlated with some of the sherd classes just mentioned on other sites in the Ocmulgee Basin which seem related chronologically and typologically with the Swift Creek type station.

One negative feature of the Swift Creek pottery complex is very significant.[9] The absence of incised ware is striking: this, despite the fact that thousands of sherds were cataloged from the mound and village midden, and that innumerable stratigraphic trenches and pits were dug. The absence of incised pottery from Swift Creek will be noted as very important in the light of discussions to come.

Other Site Exploration in Ocmulgee Related to Swift Creek

The first of these which should be mentioned is the One Mile Track site located on the west margin of the Ocmulgee River opposite the point of junction of Walnut Creek and the Ocmulgee River. The site

[8] The Vining site, located in the outskirts of Eatonton, Ga., 45 miles northeast of Macon, has been acquired by the Rural Resettlement Administration. 400 study sherds show over 90 percent of the simple linear stamp. More detailed collection of material is contemplated in the near future in an extension of survey from the Ocmulgee, using stratigraphic pits.

[9] The term "pottery complex" has been used in these pages with divergent meanings. It has on occasion referred to a series of morphological pottery features which serve to give distinction to a type of pottery, i. e., the fiber-tempered, vermiculated ware; again, as above, it may refer to a number of sherd classes, present to an appreciable extent at any site, which, through adhesion of traits, give a rough chronological index to the site.

lies within the Central City Park and State Fair Grounds and is bounded by a mile-long race track; hence the name.

Exploration was carried out by sinking numerous pits, 10 by 20 feet, through the mantle of river alluvium which covers the occupation level to an average depth of 2 feet. A study collection of 1,500 sherds was obtained from village site midden along with other cataloged flint artifacts. At present our concern is with the pottery.

One Mile Track shows pottery of Early Swift Creek type in conjunction with the fiber-tempered pottery with the vermiculated surface finish, grid bar or checker stamp, and steatite stoneware. Again the absence of incised ware is remarked.

The pottery complex at One Mile Track is thus seen to approximate closely the proportion of sherd classes indicated for Swift Creek with the same relative inclusion and exclusion of types.

There were no mounds at One Mile Track. No burials were uncovered. House sites were obscured by river scouring except for sporadic post mold indications.

Another site showing typological resemblance to Swift Creek is the Shell Rock Cave site near Brown's Mount in the east Ocmulgee Basin survey. Technically, the site is a rock shelter rather than a cave. An overhang or arched ledge of Ocala limestone 20 feet high and 50 feet wide provided an appreciable area of habitation. In trenching through the debris and sand fill underneath and in front of the shelter, evidences of occupation came out in the form of ash and charcoal beds containing numerous flint artifacts and potsherds. Uniform deposits of rock beneath the midden showed that the shelter had once extended out 50 feet or more than at present. The ash and contained midden found in situ in front of and underneath the present rock ledge indicated occupation at a period subsequent to the gradual collapse and retreat of the rock dome.

Pottery from Shell Rock Cave showed Early Swift Creek stamp, Delta stamp, grid bar and fiber-tempered ware (Theta). Flint artifacts exhibited a heavy percentage of knives, scrapers, and projectiles made from an attractive rose-colored jasper. The absence of incised ware was observed in the Shell Rock Cave collections. The presence of Delta stamped ware is an anomaly, as this class occurred very sparingly at Swift Creek. On the whole, however, Shell Rock Cave serves to substantiate conclusions drawn from other site exploration as to the combination of pottery types which go to make up the Swift Creek series in the Ocmulgee Basin.

The Chronological Position of Swift Creek in Macon Chronology

The significance of Swift Creek lies unquestionably in the existence of a typological series of stamped sherds, stratigraphically distributed,

which show stylistic variation implying the evolutionary development of a distinctive pottery decoration over a period of several generations.

The depth of the midden deposits, as well as the interpretation of mound origins and growths, imply a perceptible interval of time. It does not seem profitable at present to attempt any relative computation of the interval covered. The important point is to recognize that stamped pottery was at one time the dominant technique in pottery ornamentation in the region, and that a clearly defined variation in generic patterns took place, representing an evolutionary series covering an appreciable period of time.

The typological variations in stamped design and in general pottery morphology which define Early, Middle, and Late components of Swift Creek are clearly defined. Likewise the stratigraphic distribution of these criteria is satisfactorily exhibited. Physical vertical stratigraphy with such clear-cut implications is most unusual.

At Swift Creek we have less material relating to the final or late period than we have for the initial or intermediate stages of development. As stated, this lack comes from the destruction of the upper 4 feet of the mound. The much disturbed, deeply plowed midden in the surrounding village gives some indications. Typologically, the lines of evolutionary change away from the culminating peak achieved in Swift Creek A complicated stamp are surely exhibited. In the top of the mound, the sixth level, we had indications that the last phase of occupation preserved in the mound was the one in which the complicated stamp showed the finest execution of designs. Along with a perceived refinement in execution went a corresponding improvement in the ware. In fact, the net result is sometimes hard to measure in the individual sherds in terms of fineness of execution or more effective preparation of the decorative surface associated with advances in paste composition. Over and above all, the sudden appearance of new, more elaborate, and sophisticated compositions made up of different motifs, recurrent from those observed in the lower mound levels, remains the outstanding feature of the Middle period.

The Late period of decline or "degeneration" needs further site exploration and comparison from different sites for ideal clarification. It might be anticipated on theoretical grounds that some difficulty would be experienced in studying collections from newly discovered Swift Creek sites in determining whether one had to deal with a beginning or terminal period of stylistic development. In determinations made thus far, however, on materials gathered from points 150 to 200 miles away from the key site, no such difficulty has been found. Early Swift Creek has an inherent stylistic range which tends to hold true everywhere. The associated sherd classes tend to adhere elsewhere to form part of the Swift Creek complex. Similarly, in Late Swift Creek the general loss of artistic balance in handling over-

elaborated patterns produces the same end results. Also, Late Swift Creek sites seem to have a number of associated sherd classes, which distinguish these sites as a group from Early Swift Creek. Finally, Middle Swift Creek maintains its integrity as the culmination of an evolutionary cycle, nearly the whole of which was uncovered in seriation at the type site. Nevertheless, the fact remains that comparatively little is known as yet from intensive exploration regarding the character of Late Swift Creek variations.

In estimating the chronological position of Swift Creek, two important lacunae in the record must be noted. First in consideration is the relation of Swift Creek to Macon Plateau. At the outset it should be stated that this problem is still unsolved. The crucial data are being brought out in explorations still in progress on the Macon Plateau and on other key sites in the Ocmulgee in process of archeological survey.[10] Four years of intensive study have yielded considerable information, however, and some intimations of what to expect which may be briefly sketched here in the hope that the suggestions made will not turn out to be too premature.

The implications of Stubbs' Mound and village site for Swift Creek-Macon Plateau chronology are not yet clearly perceived as material from this site is still undergoing analysis in the laboratory as these pages are being written. Stubbs' mound was explored by students of the Laboratory of Anthropology in the summer of 1936. Subsequently, Gordon R. Willey, one of the students who remained in Macon as archeological assistant, carried out work on the mound to completion. Only a tentative sampling of the field material by levels has been made. It must be understood that any appraisal of the data given at this time is preliminary, incomplete, and quite likely to be modified by further work.

The site of Stubbs' mound and village is located on the west bank of the Ocmulgee River just below the junction of Tobesofkee Creek, 11 miles from Macon. Topographically the area is low-lying river plain subject to periodic inundation. The surroundings suggest an environment similar to that found at Swift Creek and at Lamar.

As stated, the mound at Stubbs' was excavated completely. The surrounding village site, of undetermined extent due to cultivation, the widespread scattering of surface midden, and the proximity of the marshes on the river side, has not been trenched adequately. More survey work in the village will be carried out during the winter of 1937–38.

[10] Stubbs' village site, Brown's Mount, the southeastern spurs of the Macon Plateau, Mossy Oak, Scott's Hill (a mound and village site adjoining the Monument property along the southeast boundary, on the side of Walnut Creek) give promise, either on the basis of impressions received from surface collections or from partial exploration, of affording pertinent data which might throw light on Swift Creek and Macon Plateau relations.

The mound is, or was, relatively small, not more than 60 feet in width. The present height is approximately 5 feet, but the summit had been cut away with slips to borrow dirt for filling in the field on the edge of the swamp. This operation, carried out by the tenants in recent years, was said to have resulted in the cutting away of several feet of the mound. The height at one time is stated to have been between 9 and 10 feet. Detailed investigation of the mound remnant soon substantiated this claim. The slopes and top of the mound had been covered to a depth of several feet by black midden accumulating over a preexisting mound structure. Although considerable masses of this midden remained on the lower slopes there was evidence that much material had been removed from the top and redistributed. The resulting confusion, intermixture of surface materials, was indicated by facts unearthed in exploration and preliminary study of the collections.

Analysis of field data show the following essential facts in regard to the construction and cultural history of Stubbs' mound. There had been an earlier village site occupation before any portion of the mound was built. Black midden deposited in situ on pink and white clay ("calico clay") of Eocene origin clearly represented the basal remains of human habitation. Over this earlier occupation level, a low, rectangular, ramped house mound of loam and red clay had been constructed. In size, shape, arrangement of house plan on the prepared platform, this small core mound was reminiscent of the core structure and mound envelope described at the McDougald site, as well as Mound D, on the Macon Plateau.

The contained house at Stubbs' had been burned. Over the burned clay floor was found a heap of charred pine timbers, a roof mesh of reeds, burned briquettes, and nearly a foot of fired clay considered to have been the roof sod. The supporting wall posts were easily charted in place where they had burned, permitting a good floor plan to be drawn as soon as the area was cleared. A fairly satisfactory collection of charcoal was made for dendrochronological study.

Subsequently, two other core houses were uncovered. Neither of these had been burned. One represented a submound rectangular structure not built on a prepared platform. The other resembled the first core house platform to be brought out. The absence of burning led to less structural detail being preserved but enough information was available to show the same fundamental house type as that previously troweled out.

The importance of these discoveries at the base of Stubbs' mound deserves emphasis. The essential features of a prepared rectangular platform utilized as the seat for the construction of a rectangular house exhibiting wall continuities of small vertical supports (diameter

5 to 8 inches), with or without hard-packed red loam floors, duplicate structures found only on the Macon Plateau.

The identification is strengthened by the remaining details of mound structure. Over the three basal house sites described at Stubbs' mound basket-laid sand was subsequently mounded. As at McDougald, Dunlap, and at Mound D (all of the Macon group), a plating of red clay was applied over the entire surface of the sand mound to act as a retaining or bonding material.

Finally, again as at Mound D, a house had been built on top of the red-clay plate. Only sections of the floor and a large domestic pit or hearth remained of this structure, due to destruction caused by the borrowing of mound soil. In places this uppermost house floor was mantled by black midden, which although confused by redistribution yet showed successive occupation. This midden continued down slope where thicker accumulations were found. The midden consisted of black soil, animal bones, river mollusk shells, charcoal and ash, potsherds, flint scrap and artifacts.

Some caution is necessary in referring to the sherd collections from the different stratigraphic levels at Stubbs' as indicated by mound features and the superficial mantle of midden accumulated in situ. Several facts are clear. The topmost midden contains predominantly the amorphous stamped or paddle-marked ware, and the characteristic incised which are site markers for the Lamar focus. The underlying midden on the slopes of the mound, separated from the above by outwash sheets of salmon-colored water-laid sand and loam from the mound, shows a strong percentage of stamped and plain sherds belonging to the Swift Creek complex. It may be significant that these Swift Creek criteria are also found in place on the occupation beneath the house platforms.

In the same basal midden and in the transitional zone into weathered Eocene clay diminishing sherd collections still show Swift Creek, more plain ware, and a marked occurrence of basket-imprinted sherds, some suggestive of coiled-basket impressions found on the Macon Plateau. The fiber-tempered ware with a vermiculated surface finish, which generally denotes an Early Swift Creek horizon in central Georgia, gives percentages increasing toward the bottom levels beneath the mound in which pottery is found.

These data are important since they imply a stratigraphic connection, indicated by structural mound features and superimposed midden accumulations, of three important cultural mileposts in Macon chronology—Lamar, Swift Creek, and Macon Plateau. Mound architecture itself at Stubbs' gives physical evidence that Macon Plateau mound-building traits might be subsequent to a Swift Creek occupation. The finding of specific pottery types found only in Early Macon Plateau, however, and not found in the Swift

Creek complex, may mean the interpolation of Swift Creek between two phases of plateau development.

The picture at Stubbs' is obscured by mound despoliation, as well as by much overturning of midden by the more recent Lamar inhabitants incident to the digging of graves and burial pits. Over 40 burials were found in the midden and in many instances the interments had been made in deep excavations through the midden. The inverting of midden is apparent in a number of instances. Under these circumstances it may be more advantageous to leave Stubbs' with only a tentative statement of results and proceed elsewhere for further information bearing on the subject of Swift Creek-Macon Plateau relations.

On the Macon Plateau proper the evidence seems clear at some points and ambiguous at others. Some of the most crucial discoveries have been made during the last months of 1937 and the field collections from these investigations have not yet been studied. Until the mass of data can be assembled, sorted, analyzed, checked statistically and graphically no final or categorical statements should be made. A progress summary on chronological implications to date follows.

The crux of the Macon Plateau situation, as regards Swift Creek, centers on explorations in process in the survey area between Mounds A and B at the south terminus of the plateau. Here for nearly 16 months profiling at 2½-foot intervals has been carried out with meticulous care in cataloging materials from a superimposed accumulation extending as sheet deposits to a depth of 9 feet over the old plateau surface. It has been demonstrated sufficiently by now that there had been a heavy deposition of midden on the plateau before any mound building or house construction took place. Materials from the old plateau levels will be cataloged from arbitrary 3-inch zones. There will be seven or eight of these old plateau midden zones as the deposits are frequently found in the weathered loam, sealed under the massed debris of successive occupation, to be 2 feet or more thick.

During August and September of 1937 exploration at Mounds A and B was undertaken by a combination of vertical profiling and horizontal slip removal to record the structure of four superimposed ceremonial earth lodges. These were built upon the abandoned, cleared or planed surfaces of preexisting structures, and each corresponds to a building platform or occupation in the stratified series now being worked out between the two mounds. Space does not permit of any adequate description of developments here. Moreover, changes in interpretation or in significance of new finds are so bewilderingly rapid that any statement which might be made while

the work is still in progress would need to be modified a month later.[11] Just now it must suffice to report on current progress.

It is definitely determined by the fall of 1937 that there is cultural differentiation between the occupations on the old plateau surface and the artificial accumulation of sand and clay filled soils, and hard-packed superimposed clay platforms covered with roof and wall debris, which mantle the plateau to varying depths, the thickest being 9 feet along the west slopes of the plateau.

Relatively little pottery has been cataloged from the platforms and floors of the ceremonial lodges. It seems almost certain that these houses were kept clean by the inhabitants or that they were systematically cleared of litter before new constructions were begun. The confluent occupation levels, coextensive with the respective lodge constructions, however, do yield strata box collections. Laboratory analysis of these is not yet possible. Certain conclusions are indicated from the field cataloging and handling of the sherds.

It is evident, for example, that the pottery from the superimposed building levels between the mounds has some generic distinctions from the pottery found in deep-lying levels on the north and middle sections of the Macon Plateau, and from the basal deposits of the prehistoric dugouts. In both cases the pottery is plain, red to orange in color, with a general resemblance in shape and size. Round-bottomed vessels, with globular sides, short, wide, relatively straight rims occur in all survey areas of the plateau. At Mounds A and B, however, in the upper building levels, it is apparent that the pottery tends to be tempered with a mixture of shell, vegetal, and grit, whereas the older plateau plain ware was over 90 percent grit-tempered. Moreover, in the north and middle sections of the plateau there were cataloged many pot rims with crude, conventionalized animal head modeling. The owl's head effigy was very prevalent but others suggestive of the bear, wolf, and raccoon were found. Also the rims from the north and middle sections of the plateau generally had loop handles bearing nodular protuberances of characteristic form and distribution on the handle. These specializations earlier noted in Macon Plateau pottery are almost completely modified or absent in the materials cataloged from the 9-foot level between Mounds A and B in the south end of the plateau.

The point to be stressed is that Swift Creek sherds are found as deposits in situ only on the surface of the old plateau, under the accumulated debris of successive building activities related to the construction of the ceremonial earth lodges. These are Early Swift Creek sherds for the most part with a smaller sprinkling of those determined to belong to Middle Swift Creek. Along with these Swift Creek materials on the old plateau surface are found the Vining

[11] The account given at the present writing will go to the printer in mid-October 1937.

simple stamp (simple, crisscross, or linear grooved stamps), Delta stamped sherds, fabric-impressed ware heretofore ascribed to Early Macon Plateau, and many plain hard, grit-tempered sherds. The difficulty of determining between Swift Creek and Early Plateau plain ware has already been mentioned. The presence of two parallel evolutionary trends in rim treatment in Swift Creek and Early Plateau helps occasionally to make distinctions in plain ware. Characteristic folded, notched, scalloped rims in Swift Creek; animal effigy rim modeling, handles with nodal protuberances in the plateau pottery complex—these are definitive.

In the month which elapsed between the preparation of the first and second drafts of this manuscript and the final going-over before it could be submitted for publication, the above developments have come out to demonstrate that the earth lodge ceremonials belong to the later phase of Macon Plateau occupation. It is also shown beyond controversy now that the mound-building activities were later and contemporaneous with the earth lodge constructions. This has been a difficult point to establish and presents some striking ethnological contrasts. If, as has been generally assumed, and as seems certain from field data at Macon, the large pyramidal mounds were constructed for elevation of important ceremonial buildings, it seems strange that a totally different type of ceremonial structure, the earth lodge, should have been coexisting and functionally significant in the culture of the plateau dwellers. The fault in logic may lie in the implicit assumption that the earth lodges were ceremonial. The problem cannot be tackled here except to state that no other view is tenable to the few trained observers of the ceremonial earth lodge on the Macon Plateau than that it must have been purely a religious structure. We are left with the tentative but seemingly inescapable conclusion that there are evidences of two types of ceremonial building on the plateau, which on architectural and evolutionary grounds would be considered to be at polar extremities from each other.

The important implications for chronology, with reference to Swift Creek and the plateau, are briefly epitomized. The evidence implies cultural differentiation in the Macon Plateau series not previously perceived. The indications point to an earlier and a later occupation of the plateau. The mound-building period is seen to be subsequent to the time interval when both Swift Creek and the beginning plateau flourished.

The results of extensive work thus far make possible a distinction between Early and Late Plateau. They also show the succession of Swift Creek by the late phase of Macon Plateau. But data adequate to determine the chronological relations of Early Swift Creek and Early

Plateau are either not at hand or the significance of some of the material has not yet been realized.

There is excellent promise that something will be forthcoming in relation to this part of Macon chronology in further explorations at Mounds A and B and in the methodical statistical analysis of pottery and artifacts taken from the eight occupation levels above the plateau and those cataloged by 3-inch levels from the preexisting plateau occupation. Enough has already come out to indicate as much. Until this information is available, it will be necessary to withhold further comment so far as the Macon mounds are concerned.

More recently in making a survey extension from control trenches laid out between Mounds A and B evidences of Swift Creek habitation were found on the lower west slopes of the plateau. Here a small hummocky rise on the edge of the river plain and at the foot of the plateau yielded midden in scattered lenses or generally confused in the profile due to modern disturbance. A brick manufacturing concern had cut away portions of the ground, subsequently refilling with refuse and brickbats. There was no discernible stratigraphy in the physical sense of superimposition. The area was profiled in 2½-foot vertical cuts and the material cataloged from five soil levels, distinguished by color, texture, or apparent constituency. From the lowest, more weathered portions of the profile panel in which sherds were found, both Swift Creek and plateau sherds were found. These occurred in approximately equal percentages. The Swift Creek sherds, found in conjunction with fiber-tempered ware, steatite, and a few cord-marked pieces, implied Early Swift Creek focus. Under soil creep and outwash soil sheets extending up the west slope of the Macon Plateau a special exploration trench uncovered only Macon Plateau pottery. Swift Creek habitation had apparently been narrowly confined to a small knoll or hummocky spur on the edge of the plain. The data indicated cultural discontinuity without definitely throwing light on Swift Creek-Macon Plateau relations.

Swift Creek complicated stamp does not occur except sporadically on the plateau in general trench exploration. Reference is made here to cataloged sherds from different soil zones in the open, exposed sections of the plateau where cultivation, erosion, and weathering have resulted in widespread soil changes and modifications of topography. Sherds and flint show the differential distribution noted in discussion of an early flint industry. There are no clear indications of buried middens or occupation levels subsequently covered over by some secular process of aggradation. Rather erosional scouring seems evident. The presence of sherds at depths of 30 to 40 inches in weathered loam in parts of the plateau surface seems correlated with the greater change of the soil in those places. The conclusion suggested is that there has been some factor of migration involved. The differential movement

of potsherds and flint has been remarked. Now comes the interesting conjecture regarding the differential migration of sherds belonging to different cultural horizons.

Effective, concise presentation of the essential facts will not permit of any extended digression. The apparent migration of potsherds through weathered loam presents a phenomenon unusual in the annals of archeological literature. Elsewhere the view has been advanced in this paper that the differential migration of pottery and flint is significant as one line of evidence for a prepottery flint industry. The fact or assumption of migration alone, as described, would not in itself be a logical basis of substantiation. The fact that the flints in the lowest portions of the weathered profile panels studied are also the most decomposed, and more important still the most primitive and specialized technologically, deserves more consideration.

Here we are concerned with the indications afforded that pottery of differing design and general morphological criteria appears to have migrated through weathered soils in the same differential manner. The evidence to support this view involves the presentation of a great mass of field data gleaned from extensive trench exploration on the Macon Plateau. The statistical tabulation of so much information will require much more ample space. Moreover, the studies of sherd class distribution on the Macon Plateau are not yet complete. Any statement given must be tentative as final analysis cannot be made until the field operations are closed and material included in seriation is totally represented.

Swift Creek sherds, in preliminary tabulations on strata box collections made from four 1-foot soil zones made arbitrarily in general trench exploration, show an increase in the second- and third-foot levels and a proportional decrease in the lowest or fourth zone. The total percentage of Swift Creek to the sherd population does not exceed 6 percent in any zone. The difficulty here in tabulating pottery complexes lies with the greater number of plain sherds. Since both Swift Creek and Macon Plateau have grit-tempered, plain, hard pottery, one can scarcely rely on general color criteria resulting from firing, or on paste characteristics which might hold for large collections made on different sites but would not be refined enough to permit of reliable judgments on individual sherds.

The indications are that Swift Creek habitations tended to be confined to the lower river terraces and intermediate slopes fronting or fingering out into the flood plain. Some ecological selectivity of sites has already been noted in discussing the Swift Creek complex. The importance of this implication is easily understood in trying to work out the position of Swift Creek to Macon Plateau as indicated by the stratigraphic position and percentage distribution of Swift Creek materials on the plateau itself. The fact that the Swift Creek people

seem to have avoided the main plateau section may be very pertinent. Particularly is this true when one considers that sherd aggregates are cataloged not from perceived occupation levels or floors but from scattered points in weathered loam. The hypothesis of differential sherd migration in friable, shifting weathered sandy loam soils projects into high relief a number of corollary problems of interpretation. The knowledge needed is primarily geological and few archeologists have the acquaintance with soil profile developments required to cope with the conditions observed.

A similar situation to that described from general exploration on the Macon Plateau, and in the confused west subterrace explorations, was found in general trench profiles cut through one of the spurs of fingering projections of the main plateau body to the southeast. These spurs run parallel toward a minor drainage channel of the Ocmulgee, Walnut Creek, which meanders through marshy land 300 yards from the plateau margins. Physiographically, they present the features observed in other Swift Creek sites.

Exploration incident to archeological survey of the Ocmulgee Basin, carried out under the direction of Gordon R. Willey, has included trenching of the southeastern spurs of the plateau. The details of field results will be given in a report on archeological survey to be prepared later. In connection with the preceding discussion of conditions uncovered in intensive plateau explorations, it will suffice now to indicate that the weathered soil mantles of the plateau spurs show scattered sherds occurring at depths of 20 to 30 inches. The weathered profiles in the spur tracts are not as deep as those on portions of the plateau proper.

At southeastern spur No. 1, as it was denominated in survey, top superficial soil or plowed ground gave significant percentage of pottery complexes related to the historic, Ocmulgee fields, horizon. Swift Creek and Lamar stamped sherds occurred in the same level. Swift Creek stamped increased in the lowest weathered soil zones from which pottery was cataloged in 3-inch levels. There was negligible evidence of Macon Plateau pottery. The absence of specialized plateau ware was regarded as peculiar as it was felt that that pottery complex might be expected on a topographic extension of the plateau.

Before attempting any comments or conclusions regarding Macon Plateau and Swift Creek, two other site situations should be briefly reviewed. First, in regard to the characteristics of the pottery cataloged from the prehistoric dugouts on the Macon Plateau. The basal deposits here yielded a predominantly plain ware, grit-tempered, coarse, hard, and poorly fired. There were specialized features of rim treatment noted. Swift Creek, and stamped techniques in general, were conspicuously absent. These by their rarity were of more than ordinary interest when found and generally were made "finds" to call

more particular attention to them. A review of the field diaries and field catalogs shows that these stamped sherds, now perceived to belong to the Swift Creek category, came from above the lowest pottery-bearing levels in the prehistoric dugouts. This comment seems significant in review of the dugout explorations which were carried out at a time when the full significance of Swift Creek was not realized; when, in fact, Swift Creek was still considered a more elaborate expression of Lamar.

At Brown's Mount, 9 miles away from the Macon Plateau, on the summit of another large erosional remnant rising 180 feet above the river plain, general trench exploration uncovered house sites resembling those found on the Macon Plateau and generous collections of sherds recalling the pottery complex described for the plateau. Plain, red-fired, hard, coarse, medium thick, grit-tempered ware with animal effigy rim modeling and specialized handles bearing the characteristic nodal protuberances, reappear to give the assemblage of types considered to be site markers for Early Plateau.

Swift Creek complicated stamp does not enter into the pottery morphology of Brown's Mount so far as the study of 2,000 sherds afford any indication. There is a small percentage of other stamped categories, grid bar or checker, Vining simple stamp, and a few irregular "indeterminate" stamped sherds not assignable to either Swift Creek or Lamar. Over 92 percent of the collection agrees in all particulars with a similar percentage of sherds, 3,000 of which have been studied, found in the basal deposits of the prehistoric dugouts.

Brown's Mount serves to show that there are at least two distinct periods of development in the Macon Plateau complex. Early and Late Plateau each have their individual peculiarities occurring in more than one archeological context to suggest a temporal division. Even now, however, the assumption of discontinuity of development seems weak. The conclusions permitted by results from an important site, geographically removed from the Macon Plateau, tend to strengthen chronological views obtained from the various fragmentary, more or less obscured, site situations examined elsewhere in the Ocmulgee Basin.

Summarizing, then, the best opinion to be had from the present data would point to temporal and cultural discontinuity as between Swift Creek and Macon Plateau. The evidence implies that there is a Late Plateau, represented by the mound-building activities, which came after Swift Creek manifestations, probably blanketing the immediate territory and forcing the Swift Creek people out at that point of cultural advance marked by a Middle stage of stylistic evolution in pottery stamping.

The finding of Early Swift Creek, Early Plateau, Vining simple stamp, cord-marked pottery, and Delta class stamped ware on the old

plateau levels at Mounds A and B on the Macon Plateau gives a confusing picture of plateau-Swift Creek relations during the earlier period of plateau occupation. The suggestion that Early Plateau and Early Swift Creek are coeval may not be borne out by the results of future exploration. Certainly it seems strange that plateau pottery complexes do not come out in Early Swift Creek sites, whereas Swift Creek site markers do crop out in plateau horizons. It is possible, of course, that there is not as much cultural discontinuity, or as wide temporal spans, separating these several manifestations as might be assumed. Macon Plateau might be early chronologically, as seems indicated; and so is Swift Creek, along with other classes of specialized stamped wares which come out at geographically far removed points in pure site aggregates.

The solution to these many problems may lie in the more refined analysis of material on hand, or in the exploration of other sites in the Macon area. It is hoped that enough information has been presented to report on progress in exploration to date with sufficient attention to chronology to afford some idea of the relationships obtaining between the more outstanding sites.

Additional Observations on the Distribution of Stamped Pottery

On the basis of present data Swift Creek stands out in Macon chronology as an entity. A complete cycle of evolutionary change is comprehended in the seriations represented. The preceding pages have sought to plumb the relations of Swift Creek to early pottery levels in the Ocmulgee Basin. There remains to be considered such site exploration as would appear to give the terminal connections of Swift Creek.

A review of the Swift Creek sites located immediately in the Macon area has shown that Swift Creek appears to have been cut short at a point just beyond the middle stage of development. One Mile Track, Shell Rock Cave, southeastern spur No. 1, subterrace exploration west of Mound A (Macon Group), Tuft Springs, have been noted as Swift Creek manifestations which exhibit stylistic features of Early or Middle Swift Creek. At the Swift Creek type site stylistic changes in the midden presumed to have been plowed off the top of the mound (sixth occupation level) showed initial "degeneration" in the artistic treatment of design elements.

The same stylistic trends with loss of balance and skill in execution were observed in collections of Swift Creek pottery made on sites as far removed geographically from Macon as the Georgia coast and the lower Chattahoochee Valley, i. e., Evelyn plantation near Brunswick, Ga., and Kolomoki in Early County. Intermediate sites

between Macon and these peripheral expressions of Late Swift Creek were represented in collections from Keeling's Camp on Big Indian Creek, 40 miles south of Macon on the Ocmulgee, and several sites located near Talbotton, Ga., 50 miles west of Macon toward Columbus.

These data signify that Swift Creek development was cut short in the Macon area by the expansion of Macon Plateau culture which coincided with the mound-building period of occupation on the plateau. Information coming from recent exploration at Mounds A and B on the Macon Plateau gives further substantiation to this conclusion.

In discussing Swift Creek relations to Macon chronology considerable space was given to the relation of Swift Creek to Macon Plateau. The connection of Swift Creek to Late Plateau has been indicated. In regard to Early Plateau definitive information is still being sought.

The second gap in Macon chronology relates to the terminal development in the Ocmulgee Basin following after the Late Plateau period.

Here again, at the outset, it is best to confess that present data are inadequate to show the precise line of development followed in the further evolution of stamped pottery.

The essential point is to regard the art of pottery stamping as early and basic in southeastern pottery morphology. So much seems clear from field work carried out in Georgia during the last four years. It must be recognized, however, that there are several stamped pottery complexes which appear to be widespread at an early time interval in the region. In addition to Swift Creek, other outstanding stamping techniques are Vining simple stamp, Delta complicated stamp, and the checker or grid-bar stamp.[12]

These distinctive styles in pottery decoration come out in "pure site" occurrences at points relatively far removed in the area. Frequently they show as significant minor percentages, either singly or in combination, implying trade connections between different focal points or hearths. The caution is very strong to consider the possibility of several overlapping centers of stamped pottery origination.

In archeological synthesis, perhaps more than in ethnological reconstruction, there is great danger of being led astray by simple unilinear conceptions of evolutionary change. The best course, at present, would be to define the more obvious determinants in the cultural picture, maintaining the perspective of a broad canvass, without straining after continuity not now apparent.

[12] In a system of trinomial nomenclature just now projected among several workers in the Southeast these pottery type components would be recognized as follows: (1) Vining simple stamped, (2) Napier complicated stamped, (3) Deptford checker stamped. The first qualifying term signifies the type site.

Exploration of Lamar Mounds and Village Site

Under C. W. A., beginning in December 1933 and continuing into March 1934, the Lamar mounds and village site were explored. Mr. James A. Ford, now an archeological associate of the Geological Department at Louisiana State University, was the field assistant in charge of the Lamar explorations.

The site is located 2½ miles from Macon on the west bank of the Ocmulgee in the flood plain. The village site has been covered in recent years with 16 to 20 inches of river alluvium. At intervals small hummocks, supporting a more verdant and lush vegetation, indicate the sites of small house mounds located in the village between and around the two mounds.

Reconnaissance and exploration under Mr. Ford uncovered a number of house sites, produced some preliminary information about mound structure, and have resulted in the cataloging of thousands of study sherds from midden deposits. One of the house sites was completely uncovered and the construction made evident from the remains of charred timbers, reeds, and roof sod present under the mesh of supporting materials. A rectangular flat-topped mound about 3 feet high, with regular ramped sides, a prepared clay floor, with charred wall supports present in the basal portions, clay basins inset in the floor, burials on the ramps and in accumulating midden outside the walls of the house, refuse pits and debris or midden accumulations in heaps—these original deposits and structures serve to present a representative picture of the house type, burials, and material culture indices characteristic of the Lamar village.

Up to now the chronological summary of site exploration has emphasized pottery morphology. Mound-building traits, burials, flint artifacts, and other elements of material culture will play a prominent part in any ultimate schematic arrangements. At present, however, the pottery indices will be more useful in stating the implications of specific site exploration for a Macon chronology.

At the Lamar mound and village we have a distinctive change in the pottery complex from that noted in all previously recorded site exploration. The dominant ware, amounting to at least 75 percent of all sherd collections, is complicated stamp, but is of a different order from that described at Swift Creek and elsewhere. The stamp ware of Lamar is easily demarcated from the clearly cut complicated stamp designs at Swift Creek.[13] At Lamar the stamped design ele-

[13] As a result of laboratory studies at Macon it is now believed that the Swift Creek designs could not have been impressed by a carved paddle. The application of large panels of complicated design motifs, precisely and evenly laid out over a curving decorative surface having trough-like depressions on rim and shoulder, implies the use either of a rocker stamp or a carved roller stamp. The uniformly neat, precise, clean-cut stamp impressions, looking very much as if they had been made from metal dies, favor the idea of rocker or roller stamps. In contrast, in the Lamar series impressions are shallow and obscure to the extent that design elements can hardly be made out. Stylistically, there is a loss of technical skill in execution and in originality in composition which implies "degeneration." Technologically, one begins to suspect the use of carved paddles rather than the more effective stamps used during the peak of development (Swift Creek).

ments are hard to recognize as separate distinct patterns. The carved paddles were poorly cut and were applied in a very slipshod manner to an inadequately prepared decorative surface. The result was a confused blurring and overlapping of stamped impressions which gives to the majority of Lamar stamped vessels a characteristically nondescript stamping in contrast to the Swift Creek series, even the poor class of Swift Creek (Swift Creek C class of complicated stamp).

None of the Swift Creek stamped designs have been identified in the blurred, indistinct paddle marking at Lamar. Even Swift Creek complicated stamp, class C, the poorest from the point of execution, is easily distinguishable. More pertinently, the decadent Late period at Swift Creek does not produce on the type site examples of stamping which look like Lamar pottery decoration. A purely theoretical view might regard the stylistic trend in the "degenerate" Swift Creek as leading toward what is actually to be seen in Lamar collections. But neither at Swift Creek nor at Lamar is material found which fills in the evolutionary gap on the basis of above assumption. With regard to the question of stamped pottery evolution it is evident that there is a definite time interval separating Swift Creek and Lamar.[14]

A second point of comparison concerns the distribution of the so-called fossil sherd classes on the two sites. Prominent as a site marker at Swift Creek was a small but ubiquitous assemblage of specialized wares—fiber-tempered pottery with vermiculated finish in smoothing, grid bar or checker stamp, and steatite stoneware. It is significant that these do not occur in the Lamar horizon.

A noteworthy feature of the Lamar pottery complex is the sudden appearance of a strong minority representation of a very striking incised ware. The absence of incised pottery at Swift Creek and related sites has been remarked. At Lamar approximately 13 percent of all the study sherds exhibit a bold incised technique figuring characteristic geometric designs. This incised ware has deep, broad, well-balanced lines, boldy executed in decorative panels extending around the upper circumference of the vessel. Circles, scrolls, hachures, meanders, and other frequently occurring compositions are done with a deftness and balance which strikes the eye in looking over the Lamar collections. Occasionally, punctating in association

[14] That Lamar must be removed from Swift Creek both in point of time and as regards the character of the stamped ware has been generally conceded by those working in the area and most familiar with the material. Nevertheless, it would be too extreme to state that there are no signs of connection. Lamar must not be considered as a static complex. Even at the type site, in stratigraphic series, the material taken from test pits shows permutations in the pottery indices of greatest value as site markers. The Lamar sherds taken from the basal midden show more clearly defined impressions, classifiable as a complicated stamp, whereas those from the upper midden generally show the amorphous features associated with a malleating technique and the use of carved paddles. Swift Creek motifs are occasionally recurrent but are much modified, and tend to be combined in simpler, less elaborated designs. Similarly, some Lamar patterns are vaguely reminiscent of Delta (Napier complicated stamp). In epitome, the ensemble impression of generalized Lamar is something very different from any of the classes of stamped ware regarded as early in the Ocmulgee Basin.

with incising forms both negative and positive designs, recalling styles peculiar to the historic and proto-historic sites in the lower Mississippi Valley.

We have, then, at Lamar two conflicting stylistic manifestations. These are distinctive on technological grounds. From the point of view of style, their contrasting treatment shows in the case of paddle marking much less skill in design composition and in fineness of execution than is exhibited in the incised ware. The artistic impression is created that here is found a full-blown or peak development.

Beginning exploration in the village site at Lamar, under C. W. A. auspices early in 1934, failed to produce definite evidence of stratigraphy. Theoretically, it was anticipated that in the deep midden accumulations might be found some evidence of physical superimposition of levels reflecting the merging of the two distinctive pottery types, Lamar complicated stamped and Lamar bold incised. It was apparent from the field data recorded by James A. Ford that there had been much disturbance of midden as the result of burial intrusion and the digging of many domestic pits. Tentative laboratory studies at that time showed a general admixture of stamped and incised sherds from top to bottom in the 16 stratified pits dug. The analysis by arbitrary levels showed no well-defined trends. The results were negative and hard to appraise, due to the marked churning of midden in successive occupation. The conception of Lamar village held then, and still maintained, was that probably several generations had lived on the site, heaping midden to varying levels at different points of the village area.

In August 1937, in connection with the undertaking of a stratified survey of the Ocmulgee Basin, Gordon Willey made 20 stratified pits into the Lamar village. Of these, 10 gave evidence of vertical stratigraphy, 5 were negligible so far as cataloged material was concerned, and 5 showed no change. Of the five which showed no change two were much confused by definite burial disturbances. Another was unreliable because of faulty excavation. The discrepancies in the remaining two could not be explained.

It should be remarked that the 1937 survey had superior opportunities in having a more advantageous set-up for both field work and laboratory study. Also, by then there was a clearer conception of the essential pottery complexes involved.

Briefly, the stratified indications at Lamar brought out by the 1937 survey are as follows:

First. The Lamar bold incised occurs in strongest percentage in the top 6 to 9 inches of the 2-foot midden, either decreasing to the bottom or disappearing altogether.

Second. Lamar complicated stamp shows definitely better execution in the lower level. The collections from the top midden give a mass impression of the amorphous, irregular designs, which can generally not be sketched as to design elements. These are the Lamar designs thought to have been impressed with carved wooden paddles. On the other hand, the more distinct Lamar patterns in the lower levels permit of the designation, Lamar complicated stamp, as these show less evidence of a slipshod malleating technique.

Third. There is a marked and consistent increase in semipolished or smoothed plain ware as one proceeds from top to bottom in the midden.

A more detailed and graphical presentation of the Lamar investigation will be given in a survey report now in preparation.

Interpretation of this data strengthens the views that there had been some stylistic degeneration going on in the stamping technique during the period of Lamar occupation. It follows, also, that the incised pottery came in during the period of decline. The correlated decrease, from bottom to top midden, in better stamped ware and in polished ware, is stratigraphically significant.

Finally, at Lamar in the upper levels are found pots which have both incised and stamped decoration on the same vessel. The incising in these "hybrid" specimens is generally confined to the rim or shoulder portions and is frequently set off from the stamped decorations on the body and base by lines of reed punctates. Here we have striking confirmation of the idea that Lamar is a refocalization of cultural elements coming from different areas, presumably the result of intermingling of trait complexes belonging to the lower Mississippi Basin and the native Southeast respectively.

Rim treatment at Lamar is highly specialized and may provide a clue to evolutionary connections, both in regard to the earlier stamped pottery and, as will be seen, in regard to later developments. In Swift Creek a complete seriation is afforded suggesting the evolution of a type of folded rim which first appears in the third level of Mound A (Swift Creek). In the bottom-most levels of the mound there were no folded rims but many of the rims did show an incidental extrusion of pottery paste brought about by the characteristic beveling and flattening of the lips of the pots. The indications were that this extruded paste came more and more to be smoothed out, at first casually, eventually becoming a deliberate shaping of the rim. Certainly the folding of the rims did become a permanent and characteristic feature in the rims cataloged from upper levels. In the fifth and sixth mound levels the fold becomes a smooth neat ribbon one-half to 1 inch wide. Some initial beveling or shaping of this exterior fold begins to be apparent.

At Late Swift Creek sites the surface of this enlarged folded rim comes to have many shapes, made by beveling, molding, excising, grooving, and other treatment. In addition to the specialized folded rims, Late Swift Creek sites exhibit some unusual forms of rim thickening which may be a further evolutionary outgrowth from the bizarre folded rim.

At the Lamar type site, and on many other Lamar-like sites reconnoitered, the folded rim occurs but with stylistic variations different from those observed in Late Swift Creek. Lamar rim treatment generally shows pinching or notching of the fold. Reed punctate impressions are characteristic. Frequently the rim may bear modeled human facial effigies with "coffee-bean eyes." Rosettes and teat-like nodes are other possibilities. The suggestion is made on less plausible grounds that a new rim specialization which becomes prominent at Lamar may be derived as an end product of the folded rim evolution. This is the luted rim strip which may be pinched, notched, "beaded," molded, or otherwise secondarily treated after having been pressed onto the rim of the pot. All of these are typical rim specializations and serve to show a morphological trend away from the Swift Creek complex. Implicit in the evidence at Lamar and at other sites surveyed in central Georgia is the tentative generalization that stamped pottery evolution may have pursued different courses subsequent to the Late Swift Creek phase. Lamar might be one end product pursuing an evolutionary trend which, as will be shown, culminated in a proto-historic or historic terminus. What happened in the degenerative Late Swift Creek cycle could only be conjectured.

In the foregoing discussion we have been interested in reviewing the information considered to bear on the evolution and decline of the stamped pottery technique. An important new factor comes in with the first appearance of characteristic incised pottery decoration at Lamar.

Refocalization at Lamar has been argued on the basis of data afforded by the type site. Other evidence to the same end comes from the analysis of mound features, the burial complex, and a study of other trait complexes. The idea of refocalization receives support from observations made on many other Lamar-like sites, some of them geographically removed from the Ocmulgee. The Lamar focus would appear to have been very widely distributed in the Southeast. Some of the more outstanding sites in Georgia are Neisler mound and village site on the Flint River, near Reynolds, Ga., about 40 miles southwest of Macon; the Shinholser site on the Oconee, near Milledgeville, 35 miles north of Macon; Nacoochee and Etowah, previously explored sites in north Georgia; Stalling's Island in the Savannah River, near Augusta, Ga.

In 1936 reconnaissance of documented historical Indian villages along the Chattahoochee River led to the investigation of an important site at Bull Creek, on the site of the airport at Columbus, Ga. Mrs. H. Wayne Patterson of that city, an enthusiastic student of De Soto's southern itinerary, collaborating with Dr. J. R. Swanton, cooperated generously in initiating the project. Frank Lester, an engineer trained in archeological field methods at Macon, had charge of exploration in the village and associated burial ground at Bull Creek. The importance of this site lies in the finding of a specialized funerary ware of painted effigy dog pots found with burials in the village midden. The domestic ware from the midden gave a typical Lamar pottery complex. The same conjunction of Lamar-like pottery traits with painted effigy dog pots had previously been noted for the Neisler site, on the Flint.

During October 1937 work was initiated at Irene Mound on the Savannah River, within the city limits, by Preston Holder. The work in Savannah is being undertaken to obtain information regarding the apparent stratification in Irene Mound previously observed in archeological reconnaissance. Abundant sherd collections obtained from exposed sections cut by tidal wash have identified Lamar complicated stamp as a prominent component in the cultural deposits of this site. It is hoped that explorations by Holder will check the interesting indications of vertical stratigraphy.

Separate reports will be prepared on the Bull Creek and Irene Mound investigations. Here it is desired simply to call attention to the widespread occurrence of Lamar-like sites. Until the details of field work and analysis of material are available from these explorations little comparison can be made. Enough is indicated from surface features to show the general complex of trait complexes described for Lamar. The geographical spread of these manifestations points toward refocalization as an explanation of conditions at the Lamar type site.[15]

The Trading Post Chronology

The final chapter in Ocmulgee history is closely bound up with the uncovering of an historic structure on the middle section of the Macon Plateau. In the earlier account of plateau investigations

[15] Investigation of the Lamar site is not complete. Intensive exploration has been concentrated on the Macon Plateau in order to clear that area in preparation for restoration, field exhibits, landscaping in the permanent development of the Ocmulgee National Monument. Archeological literature pertaining to Lamar-like sites is relatively more abundant. A review of past and present exploration, interpreted in terms of the Macon work, can soon be advantageously made. The discussion of the Lamar site complex will involve an analysis not only of the archeological data but also the mass of historical and ethnographic information relating to the ethnogeny of the Creeks in central Georgia. The archeological conclusions from Lamar investigations strongly support the conception of Creek Indian migrations, settlements, cultural assimilation of aboriginal tribes, recorded in such origin myths as the Chikili legend. In terms of tentative Macon chronology, the author has offered his view that the proto-historic movement and settlement of the early Creeks probably took place just before De Soto's journey through central Georgia in 1540. Dr. J. R. Swanton has considered that the De Soto narratives reflect some of the disturbance produced by tribal dislocation consequent upon these movements.

reference to this discovery was omitted, inasmuch as data pertained to a time interval and cultural sequence not related to the more prehistoric situations exposed on the plateau.

Early in 1936 general trench exploration made east and west through the whole length of the middle plateau section revealed in the profiles evidences of ditches averaging 18 to 24 inches deep, 10 to 14 inches wide at the top, showing in both sides of the trenches. The U-shaped cuts in the profile appeared in line in several trenches, suggesting an enclosure of some kind. It was decided to modify the method of exploration and to remove the soil overburden by horizontal troweling over the area rather than to resort to further profiling.

The U-shaped cuts when planed horizontally came out as ditches filled with disturbed or waterlaid sandy loam of darker color than the surrounding soil, evidently due to the decay of organic material or wood. A five-sided enclosure was worked out in its entirety. There was a broad base side, 140 feet long, facing the river toward the northwest. Two shorter sides or legs set at right angles to the base extended southeast 40 feet. The two remaining sides converged to form a triangle or gabled point directed southeast. The two sides forming the apex of the five-sided enclosure were 100 feet in length. The footing ditch, for such it was now perceived to be, had two breaks in its continuity in the base or front. One of these was 12 feet wide, the other 5 feet wide; they were apparently gates opening into the stockade from the river approach.

There were no remaining indications of decayed wood found except for the darker discolorations or black organic mold with thin discontinuous water-laid sand laminated between the darker soil areas. Vertical profiles through the footing ditch indicated horizontally laid logs probably pegged together. Early difficulties in planing the area to discover post molds were thus explained.

Inside the enclosure were rectangular areas of dark soil suggesting the decay of numerous logs. These were considered to be indications of what had once been cabins or storerooms.

Both in and around the enclosure were found burials of Indians of all ages and sexes associated with European trade artifacts and objects of Indian manufacture, including pottery. A number of burial traits not previously observed were encountered. The prevailing custom of primary flexed burials was noted, corresponding in this respect to burials at Lamar and other sites. However, the presence of artificial frontal deformation in a number of burials implied that this custom was much more prevalent in historic than in prehistoric times. Also several burials, again associated with European objects, were definitely cremated. The calcined bones had been heaped together and buried with guns, knives, axes, beads, iron ornaments, and other items. Again in three instances large pottery urns were found in-

verted at the base of shallow pits with rocks deliberately placed over the inverted pot or midden thrown in on top before the pits were filled with dirt. These very definitely suggested the possibility of urn burial but the absence of calcined bones or ashes did not give further significance.[16]

In addition to the burials in and around the enclosure there were numerous indications of house sites in the form of broad oval wall continuities traced out from post-hole alinements. The tendency for large domestic pits to be located in the center of these simple timber houses was noted in several instances and generous quantities of pottery, animal bones, flint scrap, and artifacts, scattered European objects, including some glassware and crockery, were taken from the fill. The houses were small, usually not exceeding 15 feet in diameter, and were sometimes smaller.

The implied construction consisted of light sapling wall timbers probably bent and tied to form the roof, with brush or reeds covering the whole. Sod might have been used also but this was not evidenced in the debris.

In addition to the house sites numerous refuse pits not definitely associated with post-hole indications of house floors were uncovered. Midden materials found in situ on the occupation level on which the houses were troweled out added to the data of exploration around the enclosures.

Another interesting feature was the profiled indication of a beaten trail terminating in front of the entrance to the trading post site. In profile the trail appeared as a ditch-like excavation 6 to 8 feet wide varying from 14 to 24 inches in depth. A bluish mucky clay fill in the bottom of the trail impression implied gradual deposition of clay sediments in stagnant water. The upper fill consisted mostly of water-laid or wind-blown sand.

The same trail indications had been followed at 50-foot intervals all the way across the plateau from a point at the extreme northeast rim margin beyond the outer dugout series north of Mound D to a point converging on the entrance of the trading post. The total extent of the trail thus surveyed was approximately three-quarters of a mile. Beyond the entrance to the enclosure the trail was picked up

[16] Inverted pots in small pits have been found in three different cultural horizons at Macon. From the trading post come two outstanding examples. The pots were inverted, the base perforated suggesting "killing" of the vessel. In one trading post instance, loose stone rubble about the size of a man's fist was piled over the inverted pot. Another inverted pot at the trading post was covered over with midden, apparently dumped over the vessel after it had been placed in a shallow pit. No calcined bones, ashes, or charcoal have been found in conjunction with these inverted pots to indicate cremation. On top of Mound A (Macon group), in clearing away top humus to expose the thick yellow clay plate which mantles the summit and slopes of the mound, two inverted pots were found inset in small pits sunk into the yellow clay plate. One of these was a typical Lamar "hybrid" pot, showing both incised and complicated stamped decoration. The other was a plain, red-fired water bottle of Late Plateau classification. In these instances of inverted pots there is a suggestion of cultural conservatism extending some ceremonial usage through three cultural levels.

35729—38——5

again in profile and carried southeast toward the river, dropping down from the plateau below the lower west slopes of Mound B. Beyond that point present explorations have not been attempted to trace the trail to its intersection with the river. In the plain below the plateau in all likelihood river erosion has destroyed any vestiges.

Another structural feature of importance was brought out in final exploration around the footing ditch. This was a moat-like ditch, separated by an average distance of 20 feet from the footing ditch, which indicated the line of the trading post stockade. The borrow ditch ran parallel to the footing ditch around four of the sides. It did not extend in front of the broadest or base side. The width averaged 10 feet with gently sloping sides; the depth varied from 2½ to 3 feet. The fill showed a bluish mucky clay in the bottom with water-laid sands and loams in the top fill. Midden accumulations, refuse pits which had been cut through in the process of making the moat-like ditch, burials made in the floor after the excavations were made, all served to substantiate the view that the ditch was obviously related to the structure of the five-sided enclosure.

The quantity of European trade materials found in midden, house site accumulations, and definitely associated with burials, indicated a rather numerous population of historic Indians living around a trading post which seemed at a later date to have been partially fortified. The interpretation of the moat-like ditch is still in doubt, although five-sided wall enclosures with moat-like ditches surrounding the walls were a frequent construction in the seventeenth and eighteenth century colonial fortifications of the Southeast. The cataloged European materials exhibited a large number of finds which were weapons of war. In addition to the guns, knives, swords, and pistols found with burials, there were scores of gun flints, molded lead bullets, brass buckles, buttons, and other objects suggestive of military equipage. In contrast with these materials were many trade objects, such as beads, clay pipes, coiled iron wristlets, copper and brass sheets sometimes rolled into small funnels or into cylinders. Several burials of children and women with beads and other trade trinkets were cataloged from the area.

The field data previously summarized seem fairly conclusive to the effect that general exploratory trench explorations had come upon the site of a large and thriving trading post. The military character of many of the European finds seemed on first impressions to be too evident to suggest an ordinary establishment set up primarily for trade. The presence of 50 burials representing individuals of various ages and sexes denoted the existence of a stable population and probably a fairly sizable community, as these interments had been uncovered in only so much area as was represented in general trench exploration.

So much for the archeological indications. History offered immediately no specific answer as to what the meaning of the Macon trading post might be. The best authorities had stated that Fort Hawkins (established in 1806), located about a mile northeast on the opposite side of the river, was the only military outpost known in the region and that no trading post of earlier date had been noted.

History did record, however, that Col. James Moore in 1703 had recruited 1,000 Creek Indians on the Ocmulgee River and that he had proceeded from the Ocmulgee to Florida where he had decisively defeated a force of the Spanish and their Appalachi allies. Moreover, a map in the possession of Gen. Walter A. Harris at Macon, dated 1828, still shows a trail on the west side of the river, denoted in inscription as "Moore's Trail," about 2 miles below Macon Plateau and the site of the trading-post discovery. Finally, preliminary checking of historical data shows that there are a few vague references in unpublished documents to a trading post located on the Ocmulgee around 1700.[17]

The identification of glass beads, pipes, guns, copper or brass hawk bells, a brass weight marked with the date 1712 found in Ocmulgee fields some years ago by a visitor, and a Spanish coin, together concur in giving an approximate date for the Macon trading post of between 1675 and 1718.[18]

The Yamassee wars in Georgia beginning in 1715 resulted in a general exodus of hostile or frightened Indians from the interior. Most of the settlements along the Oconee and Ocmulgee were abandoned at that time. Such archeological and historical data as has been uncovered thus far strongly suggest that the Macon trading post was abandoned and possibly destroyed then.

In the exploration of the Macon trading post we have one of the rare instances in which archeology has produced substantial building structures with evidences of military occupation for which history has very little recorded data. From so much given it is probable that historical research will fill out many of the gaps in our knowledge.

For archeological purposes we have practical assurance that we have a large Indian site of known historic dating. In any event the Macon trading post gives a terminal point to the long series of site explorations recorded in the preceding pages.

How significant and important this definite or fixed terminus may be in line with chronological studies made on the Lamar site will be perceived from the following remarks.

[17] The following authorities have assisted in the identification of historical objects: J. R. Swanton and David I. Bushnell, Jr., Smithsonian Institution; Arthur Woodward, Los Angeles Museum.

[18] Gen. Walter A. Harris and Dr. C. C. Harrold, of Macon, Ga., members of the Society for Georgia Archaeology, have historical documentation bearing on the Macon trading post in the colonial records preserved at Columbia, S. C.

In the excellent collections of study sherds and other artifacts from the trading-post area on the Middle Plateau one fundamental fact emerged on first impression: that relates to the complete disappearance of paddle-marked or stamped pottery. All of the ware taken from house sites, midden heaps, the moat, the occupation level inside the enclosure and associated with burials, is either the plain, smoothed, and polished undecorated ware or exhibits only incised designs. The shapes of pottery vessels in this horizon are also characteristic. We may note two outstanding forms, carinated bowls, and another class of vessels with flat bottoms, straight sides inclined outward, without handles or lugs. Some evidence of painted ware, with the use of fugitive red paint inside the crudely incised lines, is observed. The tendency to continue the Lamar trait of luted pinched rim strips is also remarked. Other rim specializations found at Lamar tend to continue in the historic scene. A divergent trait of the trading-post ware, as compared with Lamar, is the change in pottery temper. Lamar pottery is grit-tempered. A heavy percentage of trading-post sherds shows shell temper.

In regard to the incising of designs of pottery vessels from the trading-post area a very noticeable feature is the marked decline in the size and the precision with which the geometrical patterns were cut. Incised patterns on pottery vessels at the trading post are thin, scraggly lines, weakly and ineffectually put on in sharp contrast to the deep, broad, and boldly executed incised ware seen at Lamar. Many of the same design elements continue, especially the use of scrolls, hachures, and incised bands of parallel lines. A marked decline in fineness of execution characterizes most of the decoration.

Finally, reconnaissance elsewhere along the Ocmulgee, particularly at Indian Springs about 40 miles distant from Macon and at Holton Shoals, 10 miles north on the Ocmulgee upsteam from the site of the Macon trading post, has yielded sherd collections from the surface of plowed fields which show trade pipes, beads, and gun flints associated with plain, smoothed, or polished and incised ware of the same type found around the Macon trading post. Burials in a red clay knoll site of the entrance to Central City Park, Macon, found associated with trade objects, gave incised and plain sherds comparable to the other proto-historic or historic sites explored in Old Ocmulgee Fields.

The study of these collections has not been completed but the data coming from reconnaissance serve to strengthen the conclusions tentatively derived from an anlaysis of site collections at Macon. The indications are strong that subsequent to the Lamar occupation, which marked the first incoming of a characteristic incised pottery technique, two events took place as suggested by comparative pottery morphology: first, thereafter paddle-marked or stamped pottery

became gradually obsolete and finally disappeared entirely; second, concomitantly with the decline of stamping or paddle marking there was a gradual degeneration in the art of incised pottery decoration.

The implications of field data from several sites explored or reconnoitered further imply that the two perceived evolutionary trends, the disappearance of the long dominant paddle-marked or stamped techniques and the subsequent replacement and stylistic change in incised motifs, must have required an appreciable interval of time to take place. A generalized resemblance in incised pottery designs and other features of comparative morphology between the historic and proto-historic series in the Ocmulgee Basin and survey collections studied by James A. Ford in Louisiana and Mississippi has been noted.[19]

Thus far the author has not attempted to give time limits to any of the chronological developments described on the basis of stratigraphic and typological information. To do so in central Georgia would involve an exhaustive review of ethnographic references in conjunction with archeological findings.

At this time the opinion is stated, frankly as a hunch or impression, that the Lamar focus represents a pre-De Soto occupancy of the territory and that the permutation of pottery complexes incident to lower Mississippian influences soon led to the general replacement of the older techniques by the newcomers. The phase of ethnogeny represented here is considered to be the legendary movement of ancestral Muskhogean tribes, particularly the Kawita and Kasihta, who preempted the territory, partially driving out, partially absorbing aboriginal elements of differing culture. Origin myths like the Chikili legend suggest just such a commingling of peoples and divergent culture traits as is exhibited archeologically at the Lamar site. The persistence of the site-marking traits of incised pottery decoration, rim treatment, and burial traits to the historic threshold helps to substantiate the view expressed.

From the foregoing remarks, however, it must not be gleaned that the archeological picture of cultural developments which links the Lamar focus to the demonstrably proto-historic or historic sites is complete. The Lamar type site, as well as the other Lamar-like sites explored, surveyed, or reconnoitered, all imply a horizon in which approximately similar components were being refocalized to produce a fusion of traits which serve everywhere to define this complex. The impression is given that the impact of trait complexes considered "Mississippian" in origin—to mention a few: pottery morphology, effigy pipes, burial customs, mound architecture, house construction,

[19] Analysis of Indian Village site collections from Louisiana and Mississippi. Anthropological Study No. 2, Louisiana Department of Conservation, New Orleans, 1936.

square grounds and the presence of pottery or stone game pieces (chunky stones)—upon an aboriginal cultural complex site-indexed by stamped pottery, took place at one time interval and resulted in the same general product of refocalization. Laboratory studies of surface collections from Bull Creek on the Chattahoochee, Lamar on the Ocmulgee in central Georgia, Irene Mound on the Savannah River and Georgia coast, show slight permutations and differences which might argue some secular change of variation from the norm. It cannot be determined from the present data whether these discrepancies mean greater cultural resistance in some sections on the part of the native populations, whether a slight modification had taken place in point of time on the individual sites, or whether some ecological factor in diffusion is responsible. There is every reason to hope that an expanded archeological survey in Georgia, with more detailed analysis of site collections, made by stratigraphic test pits, will throw light on this problem.

General Conclusions

Several important generalizations may be made from the evidence at hand, evidence derived from crucial exploration on key sites. Space will not permit any discussion of these conclusions at present as each will require separate treatment in extended form.

The main points are enumerated as follows, with the few accompanying comments.

The antiquity of stamped pottery in central Georgia

One of the most striking facts gleaned from the Macon explorations is the antiquity of the stamping technique in pottery decoration as indicated by the presence of appreciable though small percentages of early stamped ware in the oldest pottery levels. It is significant that these beginning expressions of stamping are generically distinct from later forms at Swift Creek, Stubbs, Lamar, and other important sites yielding significant data on the evolution of stamped pottery. Moreover, some of the initial stamped designs and techniques show a fairly complex development. The implication is that even at that early date the stamping trends had reached a stage of complexity not to be associated with primitive or simple beginning. The assumption behind this fact would be that stamping of pottery was not only very early in the Ocmulgee Basin but that fairly elaborate styles and techniques were present either preceding or contemporaneous with the crude, fundamental plain ware which characterizes the agriculture-pottery base on the Macon Plateau. The exact implications coming from the perceived minority representations of these beginning expressions of pottery stamping at Macon are not clear at present.

Archeological reconnaissance undertaken along the river systems of Georgia, both north and south of the Ocmulgee, strongly suggest an increase in the specialized classes of early stamps toward the north, centering around the Oconee and the upper Chattahoochee.[20] Surface collections taken from numerous sites in that area show relatively high percentages, approaching "pure" site manifestations in some localities. Around Eatonton and Hillsboro, 40 miles north of Macon and interior to the fall line, these stamped pottery complexes seem to appear with increasing frequency and have associated characteristic forms of artifacts made generally from quartz or quartzite rather than flint. This point may be important as the deepest pottery level in the stratified village at Mound D showed a notable increase in Delta stamped pottery (Vining simple stamped) and an almost complete supplanting of flint by quartz or quartzite of the same smoky and honey-colored variety found around Eatonton. Preliminary reconnaissance thus implies a probable focus of still earlier stamping techniques developing 40 to 100 miles north of the Ocmulgee area. The stratigraphic position and percentage distribution of these sherd classes in the Macon series, and the implication that they come more in driblets during successive time intervals in the early chronological development of pottery complexes in the Ocmulgee Basin, indicates that the Macon area is probably peripheral to the true southeastern stamped pottery horizon.[21]

Other evidence bearing on the antiquity of stamped ware in the region has to do with the reconnaissance in Georgia centering around the Savannah Basin and extending coastwise toward Brunswick. At the present writing indications point toward the existence of a strong predominance of early checker or grid-bar stamps concentrated in this area. Moreover, the trend seems to show a coastwise movement south along the coast to Florida where the same pottery complexes occur in relatively old stratigraphic context. Again the presence of grid-bar, cord-marked ware, and rouletted sherds which intergrade into others suggesting the use of a rocker stamp seem to tie up with these south Atlantic and coastal pottery complexes.[22]

[20] Particularly the crisscross simple stamp (Vining simple stamp), Napier complicated stamp (so-called Delta in earlier laboratory studies), and grid-bar or checker stamps.

[21] The Swift Creek sites on the Ocmulgee at Macon may have been somewhat nearer the center of diffusion. Recent survey information from the Georgia coast, southwest Georgia, and the knowledge that Swift Creek occurs on sites on the west coast of Florida, may indicate that this aspect of the southeastern early stamped pottery cultures had its hearth nearer the fall line and geographic center of the area, rather than farther north in the piedmont.

[22] Cord marking in central Georgia deserves a special note. The general appearance of this ware, regarded in large representative site collections from various points on the Georgia coast and extending well upstream into the hinterland, assimilates closely the cord-marking complex of the northeastern woodland section of the United States. The trend of distribution in central Georgia, as made out from beginning reconnaissance, consistently points to a South Atlantic source of diffusion with the highest area of concentration at or near the Savannah Basin. Grid bar and various specialized denticulates seem to have a correlated distribution, geographically and chronologically, so far as present indications can be taken as a guide in the region. Against this view of cord-marked pottery distribution must be set the fact that cord marking also has a very widespread occurrence in the Mississippi Valley. Ford finds cord marking to be an important site-marking component of the Deasonville complex.

In regard to cord marking, we note the probability that the Macon area is peripheral to pottery site markers whose true center of diffusion was nearer the coast. Coming from the same quarter apparently were other classes occurring sporadically in the Macon stratigraphic series, notably the Theta pottery complex defined as fiber-tempered pottery extruded or pressed down in smoothing to give a vermicular surface finish; [23] also a steatite stoneware which seems to increase in surface collections northeast, culminating in the Savannah territory.[24]

The real problem comes in ultimate determination of the chronological relationship of the early Macon Plateau occupancy associated with the prehistoric dugouts and very primitive houses enclosed within the dugout series and elsewhere evidenced by cataloged materials from fossil soils beneath earlier mound constructions. The dominant ware here has a characteristically primitive appearance from the purely technological point of view, consisting of plain, grit- or muck-tempered ware,[25] sometimes showing decomposed vegetal tempering, crudely prepared and overfired and exhibiting a general lack of refinement in surface finishing; associated with specialization in handles with numerous variations in nodal protuberances on the handle or lips of the rims.

The pottery complex of the Macon Plateau appears to be localized in the Ocmulgee Basin so far as present information goes. There are not lacking comparative series elsewhere in the Southeast, however, and a systematic archeological survey may do much to dispel the present impression of extremely localized development. Until careful study of the large collections from many archeological contexts on the plateau can be made, and pending the results of explorations contemplated or still in progress, the chronological perspective of Macon Plateau must remain more or less uncertain.

Whether or not the Macon Plateau pottery series, possibly associated with a most unusual type of underground house, and with early evidences of agriculture, represents an archaic horizon in the Southeast is likely to be a moot question for some time. It is possible, even probable, that definitive data bearing on this controversial point

[23] In the trinomial classification recently projected by workers in the area, this fiber-tempered ware has been designated St. Simon's fiber-tempered plain. The site reference is to rich shell midden accumulations explored in 1936 by Preston Holder on St. Simon's Island, Brunswick, Ga.

[24] Stoneware is considered along with general pottery morphology rather than the use of stone because the very characteristic stone vessels cataloged from Macon sites exhibit many morphological specializations found in the pottery. Also, fragments of steatite ware occurring in site collections help in the same way as do the "fossil sherd classes" in defining chronological level or site relationships.

[25] Muck-tempered pottery on the Macon Plateau probably deserves recognition as a separate pottery complex, distinct from the plain, coarse, grit or sand-tempered, orange to red to mottled ware which bulks so large (over 90 percent in all Macon Plateau archeological contexts). That muck-tempered pottery is generically related to the basic pottery of the plateau, however, is indicated by the occasional persistence of the same specialized rim features in both, i. e., use of crude animal effigy head modeling and loop handles bearing nodal protuberances. Muck temper increases in the upper levels of the Macon Plateau along with a mixed temper consisting of grit, vegetal, and shell tempers. The changes in pottery temper, paste, and tensile strength are beginning to be appreciated as important in distinguishing sherds from lower and upper strata in the plateau.

may not be forthcoming from the present investigations. There is good reason from preliminary survey of the Brown's Mount site to expect that a check may be had on Macon Plateau results. There seems to be lacking at Brown's Mount the complicating factors of superimposed culture levels and extensive disturbance so evident on the Macon site.

At this stage it might be of advantage to call attention to a number of features in the Macon Plateau situation which might be considered identifying traits of an archaic horizon exhibiting generalized resemblances at several points geographically as far removed as the southeastern United States, the Great Plains, and the Southwest.

1. Early agriculture.[26]

2. Pottery complex: coarse, friable, grit-tempered ware, poorly fired; generally plain, red to orange to mottling from firing effects, sometimes showing cord roughening, netting or textile impressed patterns on exterior; coiled ware; globular, round-bottomed cooking vessels with wide mouths or slightly incurving rims; tendency to large loop handles bearing specialized protuberances.

3. Underground houses (?), continuous links or passage connections, occasionally separate and distinct units.

4. Earth lodge ceremonial structures with passage entrances.

It may be that the features mentioned are too generalized to have any more significance than that of superficial resemblance or convergence. At present hardly enough data is at hand in any quarter to proceed far with comparisons. Certainly the presence of these trait complexes on the Macon Plateau shows few parallels in the southeast proper. It is strange that the archeolgical analogues should be so far-flung. One is led to suspect that the pattern is archaic, the distribution peripheral to some center or hearth not yet delimited. Hypothetically one might seek for such a center of diffusion somewhere in the Mississippi Basin, if a logical explanation of such widespread cultural phenomena was to be had on ecological grounds.

MISSISSIPPIAN INFLUENCES ON THE OCMULGEE BASIN

In stating the problem concerning the antiquity of stamped pottery in central Georgia considerable attention has been given to the existence of archaic levels possibly derived from the Mississippi Basin and thus diffused later into the southeastern marignal area.

Even though central Georgia and the Southeast may be defined as an archeological area characterized by evolution of stamped pottery through remote prehistoric chronological sequences, the Macon field data suggest that the fall line and marginal piedmont territory of

[26] The arrangement of hillocks in rows broken up into small garden plots, as exhibited on the Macon Plateau, gives a different picture of maize cultivation from that recorded in descriptions and observations of early European ethnographers along the eastern coast of America. Cache pits, presumably for the storage of maize, have been found in the oldest submound occupation levels at Macon.

central Georgia are peripheral to influences coming in throughout the prehistoric and proto-historic intervals. In short, although the Southeast may be shown to be an area in which culture developed early with distinctive site markers in comparative pottery morphology, nevertheless the geographical relationship of the region to the Mississippi and the eastern woodlands makes it a periphery and essentially a marginal area which has received overlapping diffusions of cultural influences from more remote and interior points of origin. The tentative study of the large Macon collections shows many trait complexes reminiscent of archeological situations more completely worked out in the Mississippi and in the woodland section of the northeastern United States. This view of the Macon material offers a definite impression that the outside influences increase in number and in strength in the later phases culminating in the proto-historic and historic time period.

Mississippi influences have been suggested at Macon at two junctures. The earliest prehistoric movement from the Mississippi is represented in the period of mound building on the Macon Plateau. Whether or not the mound-building activities represent a natural cultural evolution as a continuous process or whether we have to do with an influx of new ideas coming from the Mississippi without marked cultural changes otherwise remains an unsolved problem.

Following a hiatus in Macon chronology subsequent to the evolutionary decline in pottery stamping at Swift Creek, the thread is picked up again at the Lamar type site. Paddle marking is then the vogue. Technologically and on the basis of specific design comparisons the changes which had taken place in Swift Creek hardly seem sufficiently in evidence to account for the wide differences observed at Lamar. Paddle marking is widely distinguished as a decorative scheme from the neat precise pottery stamping so characteristic of Swift Creek.

Lamar introduces the second mound-building period into Macon chronology. Mound architecture shows generalized resemblance to features observed in the Macon Plateau period. Moreover, Lamar exhibits for the first time a new technique of pottery decoration, incising, soon to supplant and completely dominate. Lamar specializations in rim shape and decoration are shown to persist into the historic horizon. Incised patterns increase in number and come to assimilate more closely decorative motifs known to have a wide distribution in the lower Mississippi Valley. The evidence for Mississippi influences operating in the Ocmulgee Basin becomes increasingly stronger as one proceeds from Lamar to the trading-post chronology.

A TABULATION OF SITE EXPLORATION WITH STATEMENT OF TENTATIVE CHRONOLOGICAL IMPLICATIONS

Site or component	Chronological interval	Distinguishing trait complexes with particular reference to pottery morphology
1. Brown's Mount. 2. Prehistoric spring sites on Middle Plateau. 3. House sites and deep-lying midden enclosed by prehistoric dugouts on North and Middle Macon Plateau. 4. Basal deposits in fill to prehistoric midden overlying fossil soils under Macon Plateau mounds. 5. Submound occupation, midden overlying fossil soils under Macon Plateau mounds. 6. C level in stratified village site at Mound D.	Macon Plateau I.	Prehistoric dugouts, round, oval, long oval, or beehive type; sod houses with depressed floors; early agriculture with rows divided into small field plots; pottery technologically simple, archaic, predominantly plain, coarse, grit-tempered or muck-tempered; some vessels cord-marked, cord-roughened, or built up in nets or baskets; contemporaneity of advanced stamped ware (Delta, Sigma classes) implied stratigraphically.
Macon Plateau.	Prepottery flint industry.	Flint industry characterized by primitive chipping technique applied to secondary flakes; pseudo-paleolithic or paleolithicoid facies; marked specialization of scrapers, chisels, knives, drills, awls, in skin dressing and woodworking; projectiles frequently show attenuated Folsomoid resemblances; mean patination or decomposition of flint cortex over 1 mm for many collections cataloged from deeper weathered soil zones in fossil soils underneath mounds.
1. Macon Mound group—Mounds A, B, C, D, E, McDougald, and Dunlap. 2. 9-foot level and superimposed house floors between Mounds A and B.	Macon Plateau II.	Pottery still predominantly plain, grit or mixed tempered, with more smoothed and better prepared surfaces; firing effects give orange to red and mottled, specialized handles and nodes decline; funerary ware (Mound C) distinctive, increasing influence of stamping techniques (Swift Creek) not found in older Macon Plateau horizons. Period of moundbuilding on Macon Plateau—truncated pyramidal temple structures (Mounds A, B, D), composite mosaics used for both building seats and ceremonial burial (Mound C), specialized commemorative red clay plated mound shells over included rectangular house mounds (McDougald and Dunlap mounds); ceremonial earth lodges built successively on superimposed clay platforms.

A TABULATION OF SITE EXPLORATION WITH STATEMENT OF TENTATIVE CHRONOLOGICAL IMPLICATIONS—Continued

Site or component	Chronological interval	Distinguishing trait complexes with particular reference to pottery morphology
1. Swift Creek. 2. Stubbs' Mound, submound and house floors. 3. Subterrace exploration, survey of marginal river plain at foot of plateau west of Mound A (Macon group). 4. One-Mile Track village site. 5. Shell Rock Cave.	Swift Creek series. Either interrupts and is interpolated between Macon I and Macon II or conceivably antedates Macon Plateau I and Macon II. Swift Creek pottery was cataloged from submound occupation, Mound A of Macon group. Stubbs' Mound and west subterrace exploration (Macon Plateau) might imply contemporaneity of Swift Creek and Late Plateau.	Distinctive technique of complicated stamped ware demonstrated in evolutionary series at Swift Creek, classes A, B, C; culmination of art of pottery stamping in sixth level at Mound A (Swift Creek Group); vessels conoidal, straight to slightly convex sides; seriation noted stratigraphically showing evolution of folded rim; complete absence of incised pottery; very few burials; aberrant (occupational) mounds with Mound Builder complex possibly absent; house type undetermined but suggested as simple sapling construction built on small unramped earth piles on edge of swamp or river margin.
Lamar, Horseshoe, Cowart's Landing and numerous others explored by reconnaissance in the Ocmulgee Basin. Sites of this classification apparently more numerous than any others so far as is indicated from initial reconnaissance of major drainage in Georgia.	Definitely subsequent to Macon Plateau and Swift Creek series with chronological hiatus indicated.	Comprises series of sites (Lamar type site), exhibiting predominantly paddle-marked pottery regarded as technologically and stylistically distinct from Swift Creek stamped pottery series; also includes important minority representation of incised curvilinear, scroll, and geometric designs; specialized rim treatment with pinched, reed cylinder impressed, molded or applique rim decorations; folded rims may show human effigy head modeling; pottery disks or game pieces (chunky); human head effigy pipes exhibiting specialized art; polished greenstone celts and discoidals; bone artifacts, shell ear pendants and plugs; burials in village midden, near house walls; mounds show generalized features related to Macon Plateau; houses rectangular, small timber walls and roof supports, reeds used extensively in covering, some briquettes and indicated sod covering, houses built on small regular ramped house mounds.

1. Trading post, Macon Plateau. 2. Mound C village and intrusive cemetery. 3. Central City Park entrance; burials and domestic pits. 4. Intrusive burials in top level of stratified village on Mound D (north) plateau; also in pits intrusive into buried sod of Mound D. 5. Intrusive domestic pits at Lamar. 6. Holton Shoals east village (Tarver site). 7. Indian Springs village.	Demonstrably proto-historic or historic on basis of European trade material and established typology.	Perceived temporal span is proto-historic to historic, culminating circa 1700 in Macon trading post settlement. Pottery series shows disappearance of paddle marking or stamping with consequent stylistic degeneration in incised curvilinear geometric and linear patterns. Some painted pottery. Ware characteristics about same as Lamar except for disappearance of stamped ware. Persistence of Lamar specializations in rim treatment. No mounds found belonging to this period. New burial traits show tendency to artificial frontal deformation, some evidences of increasing cremation and possible cannibalism (?). Houses smaller, simpler, of lighter construction, round to beehive in shape, without special floor preparation or mound seats and with large, round domestic pits either inside or outside walls.

Classification and Terminology

In the preceding text frequent reference has been made to the Eastern Woodlands as an archeological area from which emanated a number of important pottery site indices, conspicuous among which is cord-marked pottery. The Mississippi Basin has also been recognized as the focal point of departure of many trait complexes which found ultimate expression in the Georgian peripheral area.

In the main, these pottery complexes and associated cultural traits, uncovered in recent southeastern archeological exploration, reflect

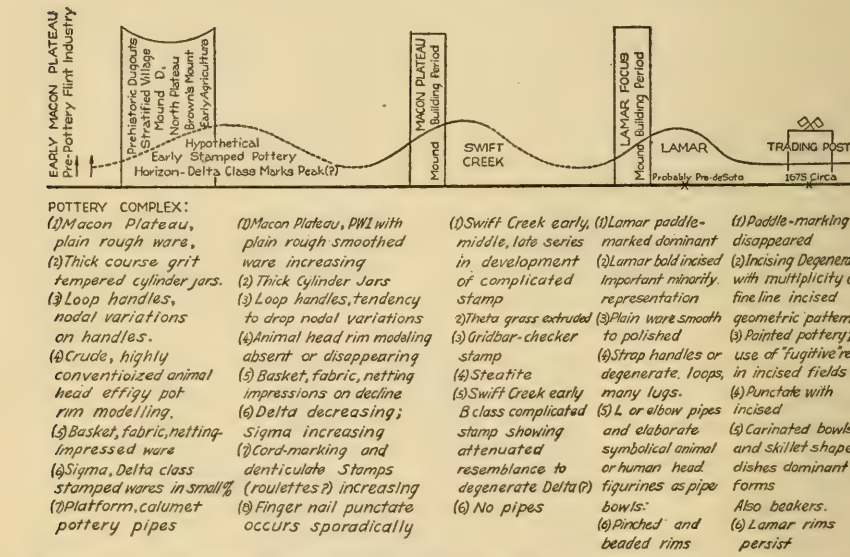

EARLY MACON PLATEAU
Pre-Pottery Flint Industry
Prehistoric Dugouts
Stratified Village
Mound D.
North Plateau
Browns Mount
Early Agriculture
Hypothetical
Early Stamped Pottery
Horizon-Delta Class Marks Peak(?)
MACON PLATEAU
Building Period
Mound
SWIFT
CREEK
LAMAR FOCUS
Mound Building Period
LAMAR
Probably Pre-deSoto
TRADING POST
1675 Circa
POTTERY COMPLEX:
(1)Macon Plateau, plain rough ware.
(2)Thick course grit tempered cylinder jars.
(3)Loop handles, nodal variations on handles.
(4)Crude, highly conventioized animal head effigy pot rim modelling.
(5)Basket, fabric, netting-impressed ware
(6)Sigma, Delta class stamped wares in small%
(7)Platform, calumet pottery pipes
(1)Macon Plateau, PW1 with plain rough smoothed ware increasing
(2) Thick Cylinder Jars
(3) Loop handles, tendency to drop nodal variations
(4)Animal head rim modeling absent or disappearing
(5) Basket, fabric, netting impressions on decline
(6) Delta decreasing; Sigma increasing
(7)Cord-marking and denticulate Stamps (roulettes?) increasing
(8)Finger nail punctate occurs sporadically
(1)Swift Creek early, middle, late series in development of complicated stamp
2)Theta grass extruded
(3) Gridbar-checker stamp
(4)Steatite
(5)Swift Creek early B class complicated stamp showing attenuated resemblance to degenerate Delta(?)
(6) No pipes
(1)Lamar paddle-marked dominant
(2)Lamar bold incised important minority representation
(3)Plain ware smooth to polished
(4)Strap handles or degenerate. loops, many lugs.
(5) L or elbow pipes and elaborate symbolical animal or human head figurines as pipe bowls.
(6)Pinched and beaded rims
(1)Paddle-marking disappeared
(2)Incising Degenerate with multiplicity of fine line incised geometric patterns
(3)Painted pottery; use of 'fugitive' red in incised fields
(4)Punctate with incised
(5)Carinated bowls and skillet-shaped dishes dominant forms
Also beakers.
(6) Lamar rims persist

Figure 7.—Graphic chart summarizing text reference (p. 63) to site tabulation with tentative chronological implications.

the terminological connotations of systematists in defining units regarded as culturally significant in taxonomic classification. The author has been privileged to conduct archeological investigations in the central section and upper Mississippi and to participate in discussions leading up to the McKern formulation.[27] There is no doubt but that the early stamped pottery categories perceived to have stratified and typological distinctiveness, widespread ecological distribution, and consistent seriations in various associated traits, represent in toto assemblages clearly basic—reminiscent of a "Woodland" pattern. Pottery morphology, burial traits, mound features, flint artifacts, ornaments, implied physical environmental relations, all concur with such analysis in appraising cord-marked and the several stamped pottery complexes in Georgia.[28]

[27] W. C. McKern, Certain Culture Classification Problems in Middle Western Archaeology, 1934.

[28] The determinant complexes of Woodland and Mississippian patterns as conceived by Thorn Deuel may be taken for reference; Fay-Cooper Cole and Thorn Deuel, Rediscovering Illinois, appendix I, pp 209 et seq.

Similarly, Macon Plateau, particularly in its later stage of development, manifests the broad definitive features of the Mississippian basic culture. A Mississippian influx of cultural traits has been remarked in Lamar-like sites in Georgia, with the correlated conclusion that refocalization was widespread and characteristic. In proto-historic and historic times the Ocmulgee settlements present archeological materials, especially in pottery morphology and decoration, duplicating almost identically many site markers familiar in the lower Mississippi. Ethnography and history afford explanatory support for the remarkable resemblances between the two regions.

However, when it comes to assessing the specific sites and constituent cultural elements on the individual sites, or related groups of sites, in terms of "phases," "aspects," "foci," "components," the problem of applying some such taxonomic device as that of McKern becomes extremely difficult and hazardous. In the first place, no archeological area in North America has been so little explored as the Southeast; or, at least, few regions show such a scarcity of published information on systematic archeological exploration. The work that has been done represents site investigation geographically far removed. The intervening areas are too large to permit of facile generalizations or assumptions concerning what might be found there.

Another extremely important factor in the Southeast is the indicated strength of many cultural impacts coming from afar and striking into the area at different time removes as peripheral spreads. Both in the piedmont and on the coast, the evidence points to isolation and cultural lag as complicating factors. Some of the complicated stamps have been shown to survive late, even to proto-historic times, under favoring conditions; others showed refocalization and rapid change. The rapidity of change and adjustment seems to have been greater in the piedmont than on the coast. The differential here may be a significant factor in future interpretation.

Finally, ethnography and archeology combine to suggest that there has been not only cultural replacement by preemption of territory, but that there were probably numerous reentry situations where ethnic groups returned after several generations, perhaps after appreciably longer intervals, as phyletic expatriates to reclaim a homeland still vaguely cherished in folk origin myths. These "backwashes" might well confuse the chronological picture of the archeologist beyond recognition. For example, the lacunae between different stages of stamped pottery development, each stage displaying "pure site" and "trade" appearances in minority representation—Swift Creek, Vining simple stamped, the checker stamped series, Napier complicated stamped, Lamar—may be due not altogether to simple disruption of evolutionary lines by the immigration of strange new peoples introducing a completely divergent cultural strain. There is

the strong possibility of repatriation by tribes whose earlier cultural pattern might have been so modified by later contacts received in their secular sojourn in other areas that the cultural indices of these on returning might be too tenuous for identification. Macon Plateau and the Deasonville complex in Louisiana and Mississippi may express some such permutation. The "Woodland" tradition persisted in the Ocmulgee up to proto-historic times in Lamar sites, howbeit the Mississippian features by then were definitely in the ascendancy.

In the earlier Macon Plateau occupation, the Mississippian features are weaker or neutralized by the presence of many traits regarded as "Woodland" by most students. Even in the Mound Builder period on the Plateau non-Mississippian factors persist in a very confusing manner. This is true at Mound C (Macon group) where a list of 60 or more traits show contrasting manifestations in such important complexes as mound architecture, burial treatment, and ceremonial constructions. Here the systematist might hesitate to assign even the basic pattern, much in the same fashion as there remains speculation regarding the taxonomic position of Adena in the chronology of the upper Mississippi.[29]

The time is not yet ripe to attempt in the Southeast any ambitious project at cultural classification implying greater or less evolutionary relationship, with specific terms to indicate the degree of phyletic connection.

Nevertheless, it is felt that a beginning should be made in defining the criteria on which future judgments may be made. It is desirable, too, to provide a terminology of wide acceptance by those workers in the area interested in systematic interpretation of field data.

To this end, pottery morphological characters are regarded as the most practical indices which might first be reduced to some sort of order and precision in description. A system of binomial or trinomial nomenclature for pottery types perceived to have common occurrence over a wide area is suggested as a first step. The value and utility of such a scheme to define pottery criteria depends largely upon the degree of cooperation between investigators and the self-restraint imposed in the process of definition. At the outset this attempt to standardize pottery descriptions promises no more than a more precise and comprehensible system of terms applied to the fundamental morphological criteria of pottery classification.

Ultimately, as field data increase and conceptions of cultural relations become more clearly seen, a more complete and complex classification might be adopted.

[29] The discussions at the Indianapolis Archeological Conference (1935) indicate how much difference of opinion still exists as to the fundamental distinctions of even such basic cultural manifestations as Woodland and Mississippian. The controversy over Hopewellian affiliations promises to wax stronger. Some students regard Hopewell as a crucial development from early Woodland derivations. Others, and the author inclines to this view, would consider Hopewell to be a stabilized refocalization of elements coming from both archaic Woodland and Mississippian patterns.

a, View from photographic tower of prehistoric cultivated field uncovered by the removal of about half of Mound D. The rectangular house and house platform in the foreground had also been built over the cultivated plot of ground and was covered by the subsequent construction of Mound D. The photo was taken after a heavy rain.

b, Vertical profile cut through Mound D, Macon group, showing trough and crest indications of cultivated field under mound base.

a, Initial profiling and horizontal stripping to uncover prehistoric cultivated field beneath Mound D, North (Macon) Plateau.

b, Beginning exploration to uncover floor of ceremonial earth lodge near Mound D, North (Macon) Plateau. The entrance passage, U-shaped clay buttresses in the entrance, inner fired clay wall periphery, debris of charred supporting timbers, and collapsed clay roof mantle are features exhibited at this stage.

a, Students of the Laboratory of Anthropology, summer field training expedition, 1936, removing charred roof mesh and debris from floor of ceremonial earth lodge.

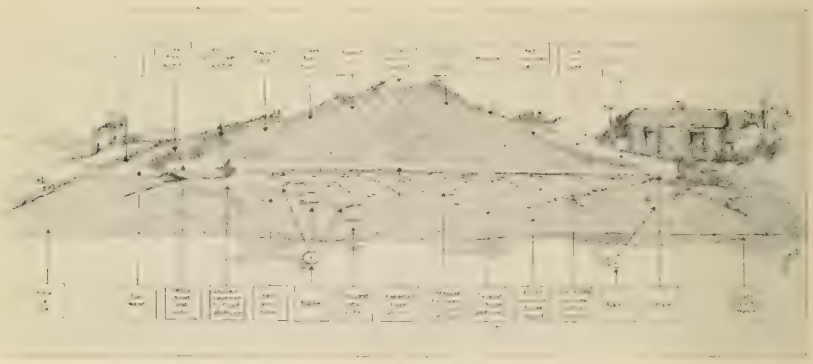
b, Profile freshly cut through fill to prehistoric dugout on North (Macon) Plateau. Note regular shape of dugout and contrast profile development with that exhibited in plate 7, *b*.

a, Section of survey of outer series of prehistoric dugouts showing shallow excavations or pits, postholes, and burials in the floor. Note that posthole indications of vertical supports increase in the shallower dugouts.

b, The 9-foot level between Mounds A and B on North (Macon) Plateau showing extension of plateau slopes by basket layers of fill bonded by clay plates. Four superimposed building levels occur in the upper 4 feet of the terrace.

a, Profile panel made through north face of Mound C exhibiting contorted and basket-laid fill under thick clay plates. Five separate and distinct mound constructions are superimpose , the uppermost showing as an eroded segment destroyed by a railroad excavation. Two submound core (first) mound log-tomb burial pits show in the foreground.

b, Profile section through east shoulder of Mound C, Macon Group, showing burial pits made intrusively through outwash sheets and clay plating of second and third, inclusive, mound constructions.



a, Exploration of McDougald Mound, Macon Plateau, showing essential features of mound architecture in relation to included house platform.

b, Log-tomb burial under first (core) mound, Mound C, Macon Plateau.

a, Exploration to uncover prehistoric spring site on top of Middle (Macon) Plateau.

b, Profile panels exposed in fill to prehistoric dugouts on South (Macon) Plateau near Mound A. Note the preservation of soil integrity as shown by the absence of normal profile development and the multiplicity of fill elements demarcated by fresh trowel marking.

a, Exploration of Swift Creek, Mound A. Right-angled exploratory trenches inset from base-line medians used with offsets to insure against slumping of friable sand, ash, and midden fill. The survey pilasters serve as an engineering backlog to previously explored ground.

b, Explorations undertaken simultaneously on Mound A and nearby house sites at the Lamar site.

a, House site exploration at Lamar site showing charred wall (supporting) timbers on house platform (under temporary shelter), flexed burial troweled out in ramp to house platform, midden heap in situ at right foreground.

b, Cremated burial from Trading Post area, Middle (Macon) Plateau. Furniture consists of rusted rifle barrel with gunflint in place, iron wristlets, brass bell, glass beads, and conch-shell core necklace.

A group of sherds representing the important minority wares which act as site markers and help to establish relative chronological position in central Georgia.

Top: Two checker stamps and three sherds of Delta complicated ware.

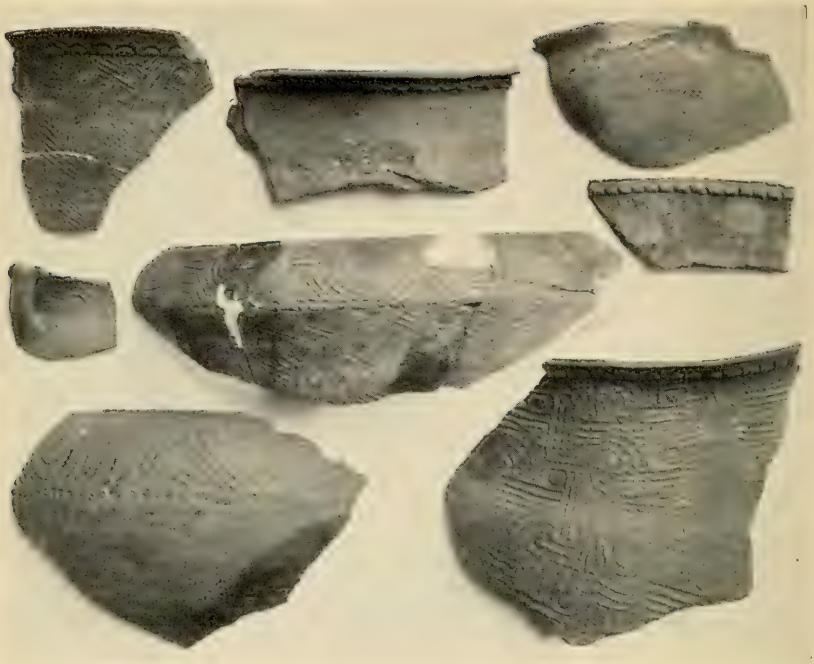
Right, top to bottom: Fiber tempered with punctates in trailed incised lines; checker stamp; fiber tempered with simple trailing; piece of steatite bowl.

Center: A large side and basal sherd from a conical pot cataloged from Swift Creek.

Lower left corner: A typical sherd of plain, fiber-tempered ware showing the vermiculated surface finish caused by smoothing over extruded fiber

a, A series of sherds showing design elements and characteristic rims from Swift Creek. The third rim sherd in the bottom row shows the stage of development attained in Middle to beginning Late Swift Creek.

b, Representative sherds from the Macon Plateau. Top row shows six variants of rim and handle with nodal protuberances. In middle row note crude animal head effigy rim modeling. Also one thick, plain rim from a cylinder jar. At the bottom, a simple stamp which occurs sporadically in small percentage. Two examples of basket or net-impressed ware, one twilled and one coiled, are given.



a, Sherds from Lamar Mound and village site, emphasizing the stamping technique so characteristic of this village site. Incised with reed punctate occurs frequently. Note the Lamar specialization of the rim.

b, Collection of representative sherds from historic or protohistoric levels. Old Ocmulgee Fields. "Degenerate" incised, plain, clay-wash smoothed, "fugitive red" paint in incised bands, beakers, weakly developed strap handles, luted rim strips beaded or pinched. The absence of any stamped pottery in this horizon is remarkable.

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The Northern Arapaho Flat Pipe and the Ceremony of Covering the Pipe

By JOHN G. CARTER

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CONTENTS

	Page
Introduction	73
The Arapaho	75
Position of the Flat Pipe among the Arapaho	76
Requirements for opening the Flat Pipe bundle	78
The Pipe-covering ceremony and feast in honor of the Pipe	80
Preliminary ceremonies	80
Procession of party of "he who covers the Pipe" to tent of Flat Pipe	80
The blessing by the Turtle	83
Painting of the party of "he who covers the Pipe"	84
Sociable smoking	87
Blessing of the food	88
Offering of the food by "he who covers the Pipe"	89
Party of "he who covers the Pipe" fed ceremonially	90
The feast	91
Distribution of food	92
The opening of the Flat Pipe bundle	92
Description of the Flat Pipe	94
Incensing of the Flat Pipe	96
Touching the Flat Pipe	96
Wrapping of the Flat Pipe bundle	98
Covering of the Flat Pipe bundle	99
Concluding ceremony	100
References cited	101
Informants	101
Index	197

ILLUSTRATIONS

FIGURE 8. Seating of persons in tent where ceremony took place	83
FIGURE 9. Painting of the party with "he who covers the Pipe"	86
FIGURE 10. Flat Pipe, Northern Arapaho	95

THE NORTHERN ARAPAHO FLAT PIPE AND THE CEREMONY OF COVERING THE PIPE

By John G. Carter

Introduction

The Flat Pipe (sĕicha, Mooney, 1896, p. 959; säeitca^{n}, Kroeber, p. 308) is the tribal medicine of the Arapaho, and its keeper is always a member of the northern band of that tribe. The word medicine, as here employed, is the word which white men have applied to those objects or ceremonies of the North American Indian which either contain in themselves, or produce by their performance, supernatural power. This supernatural power is sought and applied by the Indian not only to the purpose of healing the sick but also to obtain control of natural forces, success in hunting, good luck, strength, long life, and safety and victory in the hour of battle. The Flat Pipe in the Arapaho mythology is really the creator, and is held by the Arapaho in greater veneration than the sun (Dorsey and Kroeber, 2). Its present custodian (1936) is Oscar White, a full-blood Arapaho Indian, who lives on the Wind River Reservation at Ethete, Wyo.

The Flat Pipe has been discussed by Mooney (1896, pp. 956, 959–961, 1063), by Dorsey (pp. 191–212), by Dorsey and Kroeber (pp. 1–6), and by Kroeber (pp. 291–292, 294, 296–300, 308–310, 359–361).

The outlines of the creation myth, in which the Flat Pipe takes a prominent part, are known. This myth is in the custody of the pipe keeper. No white man has ever recorded the myth in its entirety. Fragments of the myth have been obtained from Arapaho who had heard it, and know it but imperfectly. These fragments are sometimes contradictory in their details. Those who know the myth, or who have heard it, are forbidden to tell it (Kroeber, p. 309). In outline the myth recites that in the beginning there was nothing but water. Some say that a man and his wife and son, with the Flat Pipe supported on its stand of four poles, floated alone on the water, and that "the grandfather" took pity on them. Others say that a man walked alone on the water carrying the Flat Pipe and sought land on which to rest his pipe. In this situation the man, or the grandfather (the fragments contradict each other), sent animals down into the water

to bring up land from the bottom with which to make the earth. The turtle finally succeeds in bringing up enough earth, and with this the man, or the grandfather, makes the land. The mountains, rivers, trees and grass, the animals, and finally man are all made by this first being. The Arapaho are made, and the maker gives the Flat Pipe to the Arapaho. The myth implies that either the world was made at the Flat Pipe's request or because of the Flat Pipe, and in order to provide a place on which the Flat Pipe could rest (Dorsey and Kroeber, pp. 1–6; Dorsey, pp. 191–212).

In 1892 Mooney was refused permission to see the Flat Pipe (1896, p. 961). In 1900 Kroeber observed the Flat Pipe bundle hung from its stand of four poles in the northern Arapaho sun dance lodge. At the time of Kroeber's observation it was said that the Flat Pipe was removed from its bundle and was in the keeping of the pledger of the sun dance, or in the back of the lodge behind the pledger, and that the Pipe was taken back to the bundle by the keeper at the end of the sun dance (Kroeber, pp. 291–292, 296–300). But it is also stated on reliable authority that the Pipe remains in its bundle during the sun dance (Friday).[1] The Flat Pipe has been seen by Dr. John Roberts. Weasel Bear was its keeper at that time (Mooney, 1896, 961; Friday). Mr. Hastings, a missionary, gave the feast for the Pipe, and with his wife and daughter saw the Pipe. It is believed that a Dr. Brown saw the Pipe, but informant is not sure of this. Dr. Tyler, formerly missionary in charge of the Episcopal mission at Ethete, Wyo., saw the Pipe (Friday); and was permitted to lift and handle it (Fontenelle). Mr. Roy H. Balcom, of New York, and Dr. Corey saw the Pipe and gave the feast for the Pipe (Friday). A careful search has been made of the card index catalogs of the Library of Congress and the Library of the Bureau of American Ethnology, Smithsonian Institution, in order to ascertain if any of the above named have published papers on the Flat Pipe, and no reference to any such publications has been found. If there be any oversight in giving credit where credit is due in regard to papers published on the Flat Pipe the oversight is regretted.

The writer is informed that he is the first white man to take the part of "he who covers the Pipe" in the ceremony here described (Friday), and it is to be noted that when reference is made to "he

[1] The following information was received in a letter from Harlow E. Burt, Chief Clerk, Shoshoni Agency, Fort Washakie, Wyo., dated June 26, 1937: "Your old friend Oscar White passed to his happy reward February 16th last. His daughter, Hanna Brown, has the medal you sent to her father. She told me they prize it highly and would keep it among members of their family. She also has the Arapaho peace pipe. It has not been determined as yet who will be chosen as permanent keeper of the sacred emblem. Mrs. Brown did say that Luke Smith, stepson of Oscar White, was a likely candidate. You wish to know 'if the peace pipe was exposed at some time during the Arapaho sun dance.' The answer is no. My source of information is Mr. Friday, Mr. Whiteman, Hannah Brown, and Domic Oldman, all important members of the Araphao tribe."

Friday, on a visit to Washington, D. C., in July 1937, stated that Luke Smith (Wolf Lung) had succeeded Oscar White as keeper of the Flat Pipe.

who covers the Pipe" in this paper, the reference is to the author of this paper, and all matters here related, and not credited to others, fell directly under his observation.

The following persons have been of the greatest assistance in giving information in regard to the Flat Pipe and in making it possible to see the Pipe and take part in the ceremony of covering the Pipe: Robert Friday, a full-blood Arapaho, and chairman of the Arapaho tribal council; Mrs. Robert Friday; Dr. John Roberts, missionary of the Episcopal Church among the Arapaho and Shoshoni since 1882, and still actively engaged in that work among them; Shave Head, a full-blood Arapaho Indian; Oscar White, keeper of the Flat Pipe; Luke Smith, assistant keeper of the Flat Pipe; Victor Fontenelle, an Omaha Indian, private secretary to the superintendent of the reservation; and Forrest R. Stone, superintendent of the Wind River Reservation, who gave most valuable assistance in making contacts with and gaining the confidence and good will of Arapaho Indians. Robert Friday, who acted as negotiator, informant, sponsor, coach, instructor, and interpreter in the ceremony here described, checked over the notes taken on the ceremony and on the Flat Pipe and made corrections and additions where needed.

The Arapaho

The Arapaho are an important tribe of the Algonquian linguistic stock. Several hundred years ago this tribe was located in western Minnesota. According to their traditions they were then an agricultural and sedentary people. They gradually migrated south and west from their original habitat, allying themselves with the Cheyenne at the time of their migration. Early in the nineteenth century they acquired horses. Their migration, acquisition of horses, and their emergence into the buffalo country led them to abandon their agricultural habits and culture and adopt the culture of the plains or buffalo-hunting tribes. The reason for their migration is unknown. At an early period in this migration the first division of the Arapaho occurred, when a band, later known as the Gros Ventres of the Prairie, left the Arapaho, and subsequently allied themselves with the Piegan tribe of the Blackfeet Nation. These Gros Ventres now reside on the Fort Belknap Reservation in north central Montana. The main body of the Arapaho journeyed on to the Black Hills, where they parted company with the Cheyenne, with whom, however, they continued ever after to have close alliance and friendship. The Arapaho then proceeded to the headwaters of the Missouri, but driven from that country by the Piegans and other Indians, they then found their way to the headwaters of the Platte, a part of the tribe ranging south to the headwaters of the Arkansas. In 1849 the great overland route, which followed the North Platte, permanently divided the buffalo

into the northern and southern herds, and these herds were never again united. It is believed that this led to the last division of the Arapaho.[2] That part of the tribe now known as the Southern Arapaho who now have a reservation with the Cheyenne in Oklahoma, followed the southern herd along the Arkansas. That part of the tribe now known as the Northern Arapaho, who now reside on the Wind River Reservation in Wyoming, remained with the northern herd north of the Platte. The Arapaho recognize the northern tribe in Wyoming as the mother tribe, and it is this tribe of the Arapaho who retained custody of the tribal medicine known as the Flat Pipe (Mooney, 1896, pp. 954–1023; 1907, pp. 72–74; Clark, pp. 38–43; Strong, p. 37).

Position of the Flat Pipe Among the Arapaho

The Flat Pipe is looked upon by the Arapaho as an exceedingly holy object, and is held in the highest possible veneration and respect. The Christianized Arapaho refer to it as "the chariot of God," because, they say, when a man looks upon the Pipe his "shadow" is at once transported to "the home." By "shadow" is meant the soul or spirit, and "the home" refers to the place where the Arapaho journey after death (Roberts). In the old days the Pipe was considered too holy to be carried on horseback or travois. The keeper then carried the Pipe, wrapped in its bundle, with the four poles which formed the stand for the bundle when at rest, and proceeded afoot when the camp moved (Mooney, 1896, p. 960; Roberts). As the bundle is about 2 feet long, and the poles are about 5 feet long, the keeper was obliged to walk slowly, and no great distance could be covered in a day's march. When encamped the camp circle formed around the keeper's lodge. When on the march the camp formed around the keeper, and thus the people were kept close together. This was a good thing because it kept them from straggling or scattering when moving through hostile territory (Roberts). The keeper, when the camp was on the march, walked under guard (Mooney, 1896, p. 960).

In the Northern Arapaho sun dance lodge the Flat Pipe, wrapped in its bundle, is brought into the lodge, and is there suspended from its stand of four poles (Kroeber, p. 291; Friday). The four poles are arranged like the poles of a tipi or a lodge, and from the point where they are bound together near their tips the bundle is secured by a thong and hangs free. The pipe bundle, suspended from this stand, was

[2] Robert Friday while visiting Washington in July 1937 made the following comment with reference to this statement: That the old men of the Northern Arapaho had told him that the Northern and Southern Arapaho were originally different tribes, and the southern tribe spoke a different language from the northern tribe when they first met. That originally the southern tribe lived to the south of the Northern Arapaho, and had horses. The Northern Arapaho had good lodge poles in their country, and traded these for the horses of the southern tribe, the trade being carried on in the neighborhood of Fort Dodge. As a result of this commerce the southern tribe, according to Friday's informants, picked up the language of the Northern Arapaho, and became known as Southern Arapaho. Thus there was an amalgamation of the two tribes, and not a division of Southern Arapaho from the parent stock, according to Friday.

sometimes placed in front of two or more of the sun dancers (Kroeber, p. 292). Food was offered to the pipe bundle by the dancers in the sun dance lodge (Kroeber, p. 296). The dancers also touched the pipe bundle and cried over it (Kroeber, p. 299). All those wishing to do so make offerings to the Flat Pipe bundle in the sun dance lodge. But only offerings of felt cloth or of sun shells are exposed (Mrs. Friday). It is supposed that this means that only these offerings are used to cover the pipe bundle, or to be exhibited as offerings. Offerings of cloth, other than felt, are retained by the keeper and may be given by him to the different members of his family for the women to make up into dresses. But this cloth, when so used, cannot be handled like ordinary cloth. All scraps left over from the making of these dresses must be wrapped up into a small wad or bundle, and the wad or bundle either burned, or thrown into a stream of running water. Dresses or other garments made of this cloth, when worn out, cannot be disposed of in the same manner as ordinary clothing, but must be bundled up, and the bundle must be either burned or cast into a running stream (Mrs. Friday).

When a feast is prepared in honor of the Flat Pipe the women who help prepare the feast, and carry the food to the tent or lodge in which the ceremony is given, feel amply compensated for their work, as they are permitted, at the proper time, to come into the place where the ceremony is occurring, and see the Flat Pipe and touch it with the sole of their bare right foot. They are also allowed to partake of some of the food, which is blessed, offered, and eaten in honor of the Pipe, and they feel amply rewarded for their work by the opportunity afforded them of obtaining these blessings (Friday).

The person who gives the ceremony of covering the Pipe is known as "he who covers the Pipe" or "he who worships the Pipe" or "the coverer" (Shave Head; Friday), and acquires considerable prestige and standing among the Arapaho by so doing. Very few Arapaho can give the ceremony, and comparatively few have done so. Robert Friday once gave the ceremony in order to obtain recovery from illness of his daughter (Friday). "He who covers the Pipe" by giving this ceremony not only gains blessings of health, long life, good fortune, and security for himself and his family, but also permits others to share in these blessings at his expense, since all who wish to do so may come forward at the proper time and touch the Pipe with the sole of their bare right foot, and thereby gain from the Pipe strength, and all of these other blessings. The food which is blessed and eaten in honor of the Pipe is also in great demand. The partaking of it is regarded in the same light as communion among Christians (Friday). As an abundance of food is provided, and comparatively little is consumed at the ceremony, the remainder of the

food is distributed to the village or carried home by those present at the ceremony. Thus the greatest number possible of the people may eat the blessed food, and when the ceremony is given a great number of people profit by it at no cost to themselves.

It is said that during the tenure of the last keeper, before Oscar White, the Pipe sealed itself up. When the former keeper had occasion to open the bundle and expose the Pipe he found the bowl of the Pipe sealed with a tallow plug. This, the keeper declared, had been done by the Pipe, and not by him, for the reason that the people had become so wicked that the Pipe refused to permit itself to be smoked any longer by them. The keeper also declared that when the people improved their conduct, at some future time, the Pipe would unseal itself (Friday).

Prior to the time that the Pipe was sealed it could be smoked. But the ceremony of smoking the Flat Pipe could only be gone through with at night (Friday). Dr. Roberts, who evidently saw the Pipe after it had been sealed, states that it appears to have been sealed with a pebble, and that the opening of the bowl which is covered by the seal is about the size of a half dollar.

The myth of the origin of the Pipe; of the creation of the earth; information about the contents of the bowl of the Pipe, which holds among other things a grain of corn; the formula for making the incense, as well as the powder with which the woman helper blesses the food; information about the ear of corn in the Pipe bundle, and the turtle, which is part of the Pipe equipment; the history of the different wrappings which make up the Pipe bundle; and all other matters relating to the Pipe and its ceremonies can be told only at night. It takes three nights for the keeper to impart information in regard to the creation and the origin and history of the Pipe. One who wishes to receive this information must make a suitable present to the keeper and abstain from food and water for the 3 days and 3 nights period during which he is receiving the information. He may rest during the day, and receives the information only at night. The last night is the most severe, for it takes the keeper the entire night to get through with all he has to tell (Friday).

Requirements for Opening the Flat Pipe Bundle

By opening the Flat Pipe bundle is meant having the proper ceremony performed whereby the bundle containing the Flat Pipe is unwrapped and the Pipe exposed to view. Anyone who is able to meet the general requirements, make the necessary gifts, and give the feast, may have the ceremony performed and the bundle opened. First of all it is necessary to believe in the Flat Pipe (Friday). Then

it is necessary to procure a yard or more of red or blue felt cloth, of a certain quality, with which to "cover the Pipe." As cloth of this kind is no longer carried by the traders, or in the local stores, this is difficult. In the ceremony here described the cloth required had to be purchased at second hand. In addition to the felt cloth five sun shells should be procured. These are circular or oval discs cut from some shell (perhaps abalone) with a pink inner surface, and were formerly much in demand for earrings. They are no longer carried by the traders or in local stores, and could not be obtained for this particular ceremony. Finally it is necessary for "he who covers the Pipe" to provide a feast. The feast must consist of at least five dishes, and the more varieties of food furnished in addition to this the better the feast is considered to be, according to Arapaho standards in regard to this kind of a ceremony. The quantity of food does not appear to matter so much. It is the variety of foods furnished that counts (Friday). Women must be found who will purchase, prepare, and carry the food to the tent or lodge where the ceremony is given. "He who covers the Pipe" must procure a pipe and have it filled with the proper mixture of kinnikinnick and tobacco. This is the pipe he will carry, with the cloth offering wrapped about its stem, to the tent where the ceremony is to take place. A second pipe must be procured, with a bag containing the proper mixture of tobacco and kinnikinnick, for sociable smoking during the ceremony, and this pipe and tobacco must also be carried to the place of the ceremony. In the present ceremony the absence of the five sun shells was compensated for by fastening a bill of modest denomination to the felt cloth offering, in the place where the shells would have been fastened had they been obtainable.

On the present occasion all of the preliminary purchases of food, and the procuring of women assistants, cloth, pipes, and tobacco, and all the negotiations connected with the ceremony were placed in the hands of Robert Friday and Mrs. Friday, who handled everything in the most satisfactory manner. The actual money cost is very moderate. In fact money by itself will get a person nowhere in regard to the Flat Pipe. The proper forms and ceremonies must be gone through and the proper gifts provided. Otherwise the bundle containing the Flat Pipe remains closed. The matter has to be conducted Arapaho fashion or not at all. And even if all the proper gifts can be procured, and the feast provided, it is useless to attempt to see the Pipe unless the confidence, good will, and active support of the Arapaho concerned is first obtained. Arapaho friends, well-wishers, and active supporters are a primary essential. The three things necessary to open the Pipe bundle are therefore: the confidence and help of certain Arapaho; the necessary gifts; and to do it their way.

The Pipe-Covering Ceremony and Feast in Honor of the Pipe

PRELIMINARY CEREMONIES

At the camp of Oscar White, the Pipe keeper, a wall tent has been set up for the ceremony. The door of the tent faces east. Prior to this it is understood that the keeper and his party have taken a sweat bath. Such a sweat bath requires that seven dippers full of water be thrown on the hot stones in the sweat lodge (Shave Head). Luke Smith, assistant keeper, stepson of Oscar White, and his successor in office (Friday), now goes to Oscar White's dwelling, and there removes the Pipe bundle and the four poles which support the bundle, and carries these to the tent prepared for the ceremony. Luke Smith is the only person who is authorized to carry the Pipe bundle and the four poles which are used for its stand (Friday). Oscar White appears to be an old man, and rather feeble.

The stand of four poles, with the bundle attached, is lashed securely by Luke Smith to the west tent pole of the tent where the ceremony is to take place. The poles are placed flat against the west wall of the tent so as not to be in the way. The bundle is hung free from the point of intersection near the ends of the two pairs of poles, whose butts rest on the ground to the north and south of the west tent pole. These poles are between the bundle and the west tent pole and are secured to the tent pole at their point of intersection.

While the Pipe bundle is being placed in the tent the party of "he who covers the Pipe" is forming at the tent of Robert Friday, at which place the food for the feast has been prepared by Mrs. Friday and her women helpers. Friday moved in from his farm, 10 miles distant, and borrowed a tent in Oscar White's camp for this ceremony. Mrs. Friday the day before the ceremony rode 20 miles to town in a wagon to make the necessary purchases of cloth and food, and she and her women helpers have been busy all morning preparing the feast. It is now a few minutes after 11 in the morning and all is in readiness.

PROCESSION OF PARTY OF "HE WHO COVERS THE PIPE" TO TENT OF FLAT PIPE

"He who covers the Pipe" heads the procession. He carries a pipe with a catlinite bowl, filled with a mixture of tobacco and kinnikinnick. Around the wooden stem of this pipe is carefully wrapped the yard of blue felt cloth, which had previously been folded to a convenient size. On the inner side of this cloth, next to the pipestem, has been pinned an offering, in lieu of the five sun shells which should have been placed there, but which could not be obtained. The pipe is held with the right hand forward under the bowl, the bowl being held forward, away from the body, and slanted slightly downward. It is about level with the pit of the stomach. The left hand holds the stem, back near

the mouthpiece. The hands are outside the wrapping of the pipe, and holding the wrapping in place around the pipe. The stem of the pipe is slanted to the left of the body, and is held close to the body. On the left of "he who covers the Pipe," and about a foot behind him, stands Robert Friday, who carries a pipe with a black stone bowl, and with it a bag containing a mixture of tobacco and kinnikinnick. Following these two are the wife and daughter of "he who covers the Pipe," who are followed in turn by Mr. and Mrs. Henry Elkin, Vic Fontenelle, and then by Mrs. Friday and 10 women who carry the food for the feast in pots, kettles, pans, and buckets. All the party are bareheaded and stand together in close formation. Friday's tent is south and west of the tent where the ceremony is to take place and distant from it about 100 yards. The party of "he who covers the Pipe" now advances slowly toward the tent prepared for the ceremony. The heads of the two leaders of the party are bowed. The pipe carried by "he who covers the Pipe" is held carefully by him in the manner before described, until the moment of its surrender to the Pipe keeper. While the party is slowly advancing Oscar White proceeds to a point in the rear of the tent where the ceremony is to take place, and standing there summons by name the persons designated as helpers by him, in a loud voice. On arriving near the tent, at a point close to its southeast corner, the party of "he who covers the Pipe" halts. They remain at that position for a few minutes, while the keeper of the Flat Pipe, his helpers and assistants take their places inside the tent. When all is ready a voice calls from the tent for the party to come in. The party now advances to the entrance of the tent, turns west, enters the tent, and crosses to where the Pipe keeper is seated before the suspended bundle. The Pipe keeper faces east. Standing directly in front of the keeper, "he who covers the Pipe" shifts the position of the pipe he carries, without, however, disturbing the cloth wrapping which is around the pipe. The stem of this pipe is swung clockwise, and away from the body, until the mouthpiece points downward toward the Pipe keeper, the bowl being then next to the body of "he who covers the Pipe." The pipe is then passed slowly and carefully toward the keeper, the left hand forward and under the stem near the mouthpiece, and the right hand nearest the body and under the bowl of the pipe. The Pipe keeper takes the pipe from "he who covers the Pipe," without disturbing its cloth wrapping, then removes the wrapping and places it behind him on his right, and lays the pipe he has received across his knees, the bowl to the north. Meantime "he who covers the Pipe" extends both of his hands over the head of the Pipe keeper, the palms downward and fingers outstretched and close together. He does not touch the head of the Pipe keeper with his hands. In this position he bows his head and makes a silent prayer, of his own choice, in which Friday, who is

standing on his left, joins. When "he who covers the Pipe" raises his head and lowers his hands the prayer is concluded and the Pipe keeper signs to him and the rest of his party to take seats along the south wall of the tent. All do so, taking the seats pointed out to them by the Pipe keeper. The women who carry the food bring it as far as the door of the tent, where it is then taken by Luke Smith, assistant keeper, and placed on the ground in the middle of the tent.[3]

Along the south wall of the tent, all facing north, are seated the following: In the southwest corner of the tent is seated Pete White Plume, alternate keeper; on his right is seated Robert Friday, chairman of the Arapaho tribal council; on his right is "he who covers the Pipe"; on his right is seated his wife, and on her right his daughter; on her right is Mrs. Elkin, and on her right is Mr. Elkin, and on his right is seated Vic Fontenelle, who is at the southeast corner of the tent, next to the door. In this line all, save Pete White Plume, belong to the party of "he who covers the Pipe." Seated along the north wall of the tent and facing south are the following: In the northwest corner of the tent is Carry Shot Gun, helper; on his left is George White Antelope, helper; on his left is seated Pete L. Brown, helper; on Brown's left is a Southern Arapaho visitor, whose name could not be ascertained; on the visitor's left is Esau Grasshopper, helper; and on his left, seated nearest to the door, is Yellow Calf, helper. There are, in all, five helpers and one Southern Arapaho visitor (Friday). The visitor came to Wind River with three bus loads of Southern Arapaho who made a 3 days' journey from Oklahoma to see the Northern Arapaho sun dance. He is greatly pleased to be present here and see the Flat Pipe, which he had never hoped to see, and he takes occasion at the proper time in the ceremony to express his appreciation and thanks to "he who covers the Pipe." Along the west wall of the tent, and facing east, are: Oscar White, keeper of the Flat Pipe, who is seated directly in front of the west tent pole and the Flat Pipe bundle; on his left is seated Luke Smith, assistant keeper, and his stepson; on his right is seated Lizzie White Plume, woman helper to the Pipe keeper (Friday). There are 17 persons present altogether. Shave Head states that he and his wife sometimes assist Oscar White in the Flat Pipe ceremonies, and that Mrs. Yellow Bear, Oscar White's niece, often assists as woman helper, and that Chester Yellow Bear[4] sometimes takes the place occupied in the present ceremony by Pete White Plume. Both Pete White Plume and Chester Yellow Bear, who is not present at this ceremony, may be helpers. Friday states

[3] At this point the Pipe keeper looks over the food offerings and decides whether to give the complete ceremony, entirely exposing the Flat Pipe, or to give the ceremony in abbreviated form, by opening the bundle wrappings and affording those assembled only a brief glimpse of the Pipe resting in the bundle wrappings. This decision is entirely within the discretion of the keeper, and he need communicate his intended course to no one. In the ceremony here described the Flat Pipe was completely exposed and the entire ritual was given. This according to Robert Friday.

[4] Chester Yellow Bear is now (1938) assistant to Luke Smith, the Pipe Keeper (Friday).

that Lizzie White Plume is not related to Oscar White, but was called in because of her knowledge and skill in conducting the part of the ceremonies assigned to her. The fact that the assistant keeper, Luke Smith, is related to Oscar White, and is to be his successor, supports the statement (Mooney, 1896, p. 959) that this Pipe is handed down and kept only in a certain family of the Northern Arapaho. A diagram showing the lay-out of the tent and the positions of the various persons present is here appended (fig. 8).

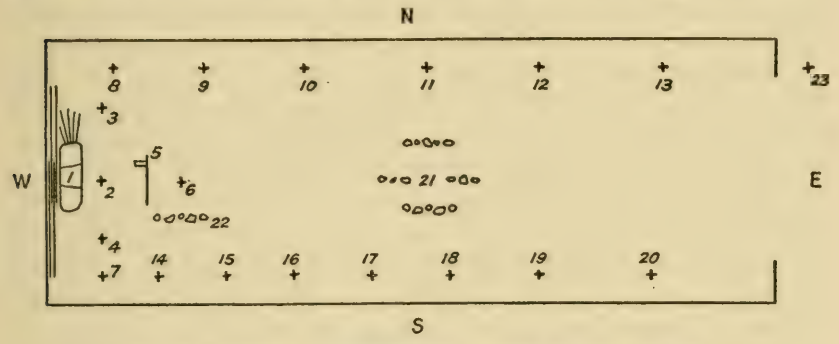


FIGURE 8.—Seating of persons in the tent where the ceremony took place.

1. Flat Pipe bundle slung on its stand. 2. Oscar White, keeper of Flat Pipe. 3. Luke Smith, assistant to keeper of Flat Pipe. 4. Lizzie White Plume, woman helper. 5. Pipe with catlinite bowl, brought in by "he who covers the Pipe." 6. Incense smudge. 7. Pete White Plume, alternate keeper and helper. 8. Carry Shotgun, helper. 9. George White Antelope, helper. 10. Pete L. Brown, helper. 11. A Southern Arapaho guest. 12. Esau Grasshopper, helper. 13. Yellow Calf, helper. 14. Robert Friday, instructor and interpreter to "he who covers the Pipe." 15. John G. Carter, "He who covers the Pipe." 16. C. C. Carter; 17. M. E. Carter; 18. Mrs. Elkin; 19. Mr. Elkin; 20. Mr. Fontenelle, of the party of "he who covers the Pipe." 21. Food brought in for the feast. 22. Food brought in for feast placed before woman helper to be blessed. 23. Woman on lookout before the door of the tent.

THE BLESSING BY THE TURTLE

When all are seated the keeper takes the pipe brought in to him by "he who covers the Pipe" from its place across his knees and puts it on the ground before him. It is laid pointing north and south, the bowl being to the north. The keeper then reaches into a bag at his right hand, which is made of buckskin and painted red, and takes out a turtle. The upper and lower shells of the turtle are painted red. The head of the turtle projects slightly from the shell, as do the paws. The head and the paws are of a hard, stony substance. The daughter of "he who covers the Pipe" observed that there seemed to be seeds inside the turtle shell, or else pebbles, as the turtle rattled when moved suddenly. The turtle appears to be an ordinary mud turtle. It is stated that this is the turtle who went down under the water to get the mud with which the earth was made in the beginning, according to the origin myth (Friday). The turtle was not taken from the Pipe bundle, as has been noted. The Pipe bundle is not opened until later in the ceremony.

The turtle is passed from hand to hand until it reaches Vic Fontenelle, who is seated at the southeast corner of the tent, near the door. Instructions are now given on how to handle the turtle, both by Oscar White, the keeper, and Luke Smith, his assistant. These instructions are interpreted by Robert Friday.

The turtle is first grasped with the left hand and is passed up the inner side of the right leg, from the ankle upward, and then up the body to the heart, and is pressed for a moment against the heart. Still grasped with the left hand, the turtle is then run up the right arm, from the wrist to the shoulder, and then across the body to a point over the heart, and is pressed for a moment against the heart a second time. It is then moved across the forehead with a semicircular motion and is transferred to the right hand. Some of the Arapaho made this semicircular motion over their heads, and by some this motion was gone through after the turtle had been transferred from the left hand, the motion being done with the right hand. The turtle when grasped in the right hand is then passed up the left arm, from wrist to shoulder, and across the body to a point over the heart, and is pressed for a third time against the heart for a moment. The turtle is then passed up the inner side of the left leg, from the ankle upward, and then up the body to the heart, where it is pressed for a moment for the fourth time. The turtle is then taken in both hands, the head is bowed, and the head of the turtle is held close to the lips, and four deep inhalations are made. Some of those present, including the keeper, held the turtle's head between their lips while making these four inhalations. When this has been concluded the turtle is passed with the right hand to the person directly on the left, who takes the turtle with his left hand, and in turn goes through the motions which have been described. The turtle thus travels clockwise around the tent, Vic Fontenelle, sitting south of the door and on the extreme east of the line along the south wall of the tent, receiving it first, and Yellow Calf, sitting north of the door, and on the extreme east of the line along the north wall of the tent, receiving it last. This ceremony is in the nature of a blessing (Friday). The purpose of the ceremony is probably to gain power and vital essence from this holy object.

PAINTING OF THE PARTY OF "HE WHO COVERS THE PIPE"

Luke Smith, assistant keeper, now rises from his place and leaves the tent, taking with him a paddle with which to carry live coals. He returns shortly with a live coal on the paddle and places the coal in front of Oscar White, the keeper. The coal is placed between the catlinite pipe that lies before the keeper and the door, but within easy reach of the keeper. Just before the coal is brought in "he who covers the Pipe" and all his party remove their shoes and stockings

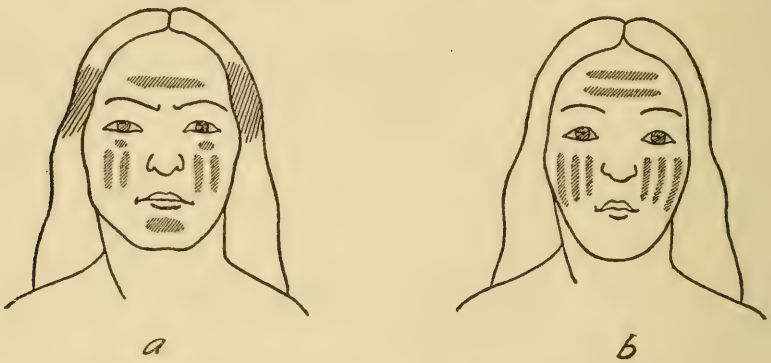
at the request of the keeper. They remain thus barefooted until almost the end of the ceremony.

Red paint, from a skin bag which is painted red, is now procured by Luke Smith and by Lizzie White Plume, the woman helper. They proceed to break off pieces of the red paint and mix it with tallow between the palms of their hands. The turtle is meanwhile restored to the keeper, who puts it back in its bag on his right. The keeper now takes up a smaller bag from which he takes a pinch of a reddish powder between the thumb, index, and middle finger of his right hand. The reddish powder is incense. The keeper makes five feints with the pinch of incense downward and over the catlinite pipe which lies before him. He then makes five feints with the pinch of incense over the live coal which lies just beyond the pipe. He deposits the incense upon the live coal. While doing this he recites a prayer in an undertone. It is to be noted that no prayer is said out loud throughout these ceremonies, and no songs are sung. Most prayers are uttered silently, or recited in an inaudible tone. The feints with the incense are said to be made to the four directions and to "above" (Friday). The incense is composed of cedar and castor among other ingredients, but all of the ingredients which go into the incense can only be learned by undergoing the 3-day fast and hearing the story of the Pipe and all that appertains to it from the keeper during the three nights of the fast (Friday).

As the smoke is arising from the incense Luke Smith, holding the paint which he has just mixed between the palms of his hands, and with the palms held close together, fingers extended and touching each other, extends his hands over the smoke of the incense. He first holds his hands with the back of the right hand down toward the smoke and then the back of the left hand to the smoke. Again he holds the back of his right hand to the smoke and again the back of his left hand. He then presents his hands to the smoke still held in their original position, but so that the sides with the little fingers are down toward the smoke. It will be observed that the usual four motions, and then a fifth, are gone through in passing the hands holding the newly mixed red paint through the incense. When Luke Smith has done this Lizzie White Plume does likewise with the red paint which she has just mixed. They are now ready to paint "he who covers the Pipe" and his party. Friday, "he who covers the Pipe," Elkin, and Vic Fontenelle are painted in turn by Luke Smith. The women of the party, consisting of the wife and daughter of "he who covers the Pipe" and Mrs. Elkin, are painted by Lizzie White Plume (fig. 9).

The person to be painted sits close to the person who is applying the paint, and with feet extended. The painting begins with the feet. Five dots of paint are applied to the feet with the ball of the thumb

of the painter. The right foot is painted first and then the left foot. The first dot is applied to the instep, then near the arch, then the arch, then below the ankle, and finally the ankle. In the case of "he who covers the Pipe" a stripe was run up the outside of the leg on the trousers. The hands and wrists are painted next. The painter grasps both hands of the person to be painted with both of his hands and applies the spots of paint with the balls of his thumbs simultaneously. A spot of red paint is applied to the palms of the hands, then to the fatty part at the base of the thumbs, than at a point between thumb and index finger, then on the backs of the hands near the wrists, and finally on the wrists. In the case of "he who covers the Pipe" a



a Face paint—Man

b Face paint—Woman

FIGURE 9.—Painting of the party with "he who covers the Pipe." Body paint, men and women; on feet five spots made with ball of thumb by person applying paint. These spots begin on inner side of arch of foot, out over arch and up toward ankle. On the hands the paint consists of five red spots applied with ball of thumb of the painter, and start on palmar surface, near heel of hand, then over fatty portion at root of thumb, and up toward wrist from point between thumb and index finger. "He who covers the Pipe" had two stripes run up each pants leg and each sleeve, and two spots on the shirt, one above each nipple. The others reported that they did not get this extra attention. On men paint is also applied to hair on each side of head by painter pressing palms of his hands to both sides of the head of the man painted at the same time.

line of red paint was run up each forearm on the outer side and over the shirt and coat sleeves. Also a spot of paint was placed, in his case, above each breast upon the shirt. The face is painted next. With the men the chin is painted first; then two lines drawn vertically down each cheek from below the eyes; above these lines a dot is placed just below each eye; and finally a horizontal line is drawn across the forehead. The painter's hands are then placed on each side of the head, thus coloring the hair. The women receive three stripes horizontally across the forehead and three vertical stripes down each cheek, but no paint is applied to the chin. The feet and hands of the women are painted in the same manner as that of the men, as far as could be observed. The painting is accompanied by no audible prayer and the paint is laid on without any particular care or precision, but the job is done in a speedy and workmanlike manner.

The women, who are painted by Lizzie White Plume near the southwest corner of the tent, retire directly to their places after being painted. The men, who are painted by Luke Smith near the northwest corner of the tent, after receiving the paint retire to their places, and in doing so pass between the incense coal and the food which is placed in the center of the tent. Oscar White, keeper; Luke Smith, assistant keeper; Lizzie White Plume, helper; and Pete White Plume (Friday), alternate keeper, are not painted and do not paint themselves. The five helpers and the Southern Arapaho visitor, who sit in line along the north wall of the tent, paint themselves with red paint. No particular design was noted in their painting, but they did rub their chins with the paint, and their cheeks and hair. They do not paint their hands or feet. Those who have received the red paint from Luke Smith and Lizzie White Plume cannot partake of the feast, but are fed ceremonially in a manner later described. When "he who covers the Pipe" and his party have all been painted, and have returned to their places, Oscar White and Luke Smith, through Robert Friday as interpreter, warn those who have received the paint that they must not wash the paint off with water until the next day. Otherwise, they say, it will rain hard. Oscar White relates that once an Arapaho attended this ceremony and did not heed the warning given him, and washed the sacred paint from his face with water right after the ceremony. He was drowned in a cloudburst the next day. But, Oscar White added, it is proper to remove the paint, if desired, with vaseline or some similar substance, and if done in that manner no harmful results will follow.

The paint is applied as a blessing to "he who covers the Pipe" and his party and it resembles the first earth which was brought up from under the water by the turtle when the world was created (Friday). In the Northern Arapaho sun dance the Pipe keeper was observed applying the first touches of the body paint to some of the dancers, and he followed somewhat the same method of painting as observed in this ceremony (Kroeber, p. 294). Luke Smith and Lizzie White Plume were observed, in mixing the paint, spitting in the palms of their hands. Whether this act is ceremonial, as it is in the Rabbit tipi of the Southern Arapaho sun dance (Dorsey), or is simply to hasten the mixing of the paint, could not be ascertained.

SOCIABLE SMOKING

As before noted, in addition to the catlinite pipe brought in by "he who covers the Pipe" which lays before the keeper, Friday has brought with him a pipe with a black stone bowl and a supply of tobacco mixed with kinnikinnick in a bag. This pipe is used for sociable smoking, although certain ceremonial forms are followed in this smoking also.

The pipe is passed stem up, the bowl forward and away from the body, and is passed with one hand. Sometimes the pipe is passed with the bowl toward the body, but the stem is always upward, and at an angle. The pipe is filled and lighted by Friday, who passes it to the man on his left, who smokes, and the pipe is thus smoked down the line, following a clockwise direction, until it reaches Yellow Calf, who sits just north of the door. He smokes, and then the pipe is passed from hand to hand back to Friday, who fills and lights it again as often as is necessary. "He who covers the Pipe" and his party do not join in this smoke. Lizzie White Plume smokes the pipe in her turn. Friday says that this smoking will continue until the supply of tobacco he has brought is exhausted. He has gauged the time of the ceremony and his supply of tobacco well, as his tobacco gives out just before the end of the ceremony. The smoking of this pipe continues throughout the meal, which is eaten later. This is the only occasion among the Arapaho where it is considered proper to smoke a pipe during the course of a meal (Friday).

BLESSING OF THE FOOD

Luke Smith now brings forward a dish, receptacle, or pot containing some of each of the foods brought in for the feast, and places these before Lizzie White Plume, the helper. Lizzie White Plume obtains two can openers, which are taken from the bag which contains the turtle. With these the canned goods are opened and their contents poured into separate containers. There must be at least five varieties of food for this feast, and the greater additional varieties of foods provided the better the feast is considered for this ceremony, according to Arapaho standards. It is stated that the feast here provided measures up to the best Arapaho standards (Friday). Among other things which have been provided are bread, crackers, tea, coffee, boiled meat, gravy, tomatoes, vegetable soup, meat soup, canned peaches, canned pears, stewed apples, stewed berries, and a dish of boiled rice with raisins. A receptacle containing each of these dishes is now placed within arm's reach of Lizzie White Plume, who now takes from a bag some black powder. The ingredients of this powder are not known, and can only be learned by making the 3-day fast necessary to gain other information in regard to the Flat Pipe (Friday). The black powder is used in the blessing of the food. The procedure followed in blessing each receptacle of the food, including bread and crackers, tea, coffee, and soup, is the same. Lizzie White Plume takes a pinch of the black powder from the bag, which is small, made of buckskin, and painted red, and holding the powder between the tips of the thumb and the index and middle fingers of her right hand and praying silently, places a pinch of the powder in the food contained in one of the receptacles before her. The first pinch of the powder

is put in the food in the east part of the receptacle. A pinch of the powder is then placed in the food in the south part of the receptacle, and then in the west, north, and middle of the receptacle. A prayer is said, silently, during the placing of each pinch of powder. This is done to the food in each of the containers which have been placed before Lizzie White Plume, and these containers have every variety of food which has been brought in for the feast. The other containers of food remain in the center of the tent as before. They hold only duplicates of the foods placed before Lizzie White Plume. These acts are intended as a blessing and consecration of the foods which have been brought in for the feast (Friday). While the food is being blessed Oscar White, the keeper, takes a horn spoon from the bag which holds the turtle and the can openers. The bag is at his right hand. The spoon appears to be very old. The keeper then takes some black paint, and using the index finger of his right hand as a paint brush, proceeds to decorate the spoon. Two lines are drawn from the lip of the bowl of the spoon, on each side of the bowl, the four lines extending down into the bowl, but not quite to its deepest point. In the center of the bowl, about equidistant from the ends of the four lines, is painted a black dot. The keeper hands this spoon to Lizzie White Plume as soon as she has finished her blessing of the food. During the blessing of the food the flaps of the tent are closed and they are not rolled back again until after "he who covers the Pipe" has offered the food to the four directions, the above, the earth, and Pipe bundle.

OFFERING OF THE FOOD BY "HE WHO COVERS THE PIPE"

Lizzie White Plume now takes the spoon and dips a very smal morsel of food from the east side of one of the receptacles before her This she transfers to her left hand. She then dips small morsels o food from the south, west, north, and center of this receptacle, and transfers these morsels to her left hand. Samples of food are taken from each receptacle before her in the same manner. Minute quantities of the bread and crackers are broken off and placed in the spoon, five morsels of each being taken, following the same procedure observed with the other foods. Minute quantities of the tea and coffee and other liquids are taken up in the same way, and moisten the mixture of foods held in her left hand. The mixture thus obtained is kneaded carefully with the left hand and is then placed on the tip of the horn spoon held in the right hand. The spoon with its contents is now carefully handed to "he who covers the Pipe" by Lizzie White Plume. "He who covers the Pipe" leaves his place and takes his stand directly in front of the Pipe keeper, between the catlinite pipe which lays before the keeper and the incense smudge. He stands with his back to the keeper, facing east. The incense smudge is in front of him and the catlinite pipe behind him. He holds the spoon in his right hand,

at arm's length, the arm at an angle of about 45 degrees. Robert Friday stands on his right to aid and instruct him in what to do. The spoon, held upward at arm's length, is pointed first to the southeast corner of the tent and given four slight upward motions. It is then pointed south of east, and is again given four slight upward motions. The spoon is then pointed due east, and a single strong upward motion is given it. By this motion the food is offered to the sky, or above. The spoon is then pointed north of east, and four slight upward motions are made with it. The spoon is finally pointed to the northeast corner of the tent, and four slight upward motions made with it. The contents of the spoon are then carefully taken from it and placed on the ground at a point northeast of the smudge, and within about a foot of it, and the spoon is handed to Robert Friday. "He who covers the Pipe" now takes a morsel of the food which he has deposited on the ground, between the middle and ring finger of his right hand, and turns west, facing the Pipe bundle. He moves close to the bundle, taking his stand north of the keeper, and between the keeper and Luke Smith. With both hands, palms down and fingers extended, but held close together, he strokes the Pipe bundle four times. In doing this the hands are held parallel, the thumbs being about 6 inches apart. The strokes are given from right to left, and are made slowly, carefully, and with great deliberation. "He who covers the Pipe" then turns east again and deposits the morsel of food held between his fingers on the food which he just deposited northeast of the smudge. He then returns to his place. The consecrated food has now been offered by "he who covers the Pipe" to the four directions, to above, to the earth, and to the Pipe bundle. The flaps of the tent are now opened.

PARTY OF "HE WHO COVERS THE PIPE" FED CEREMONIALLY

Luke Smith now comes forward and removes all of the food which has been blessed from in front of Lizzie White Plume, with the exception of the pan filled with boiled rice and raisins. The food which has been blessed is placed with the other food in the center of the tent. Luke Smith then returns to his place. Robert Friday then goes forward and squats down in front of the pan containing the rice and raisins. Lizzie White Plume dips the horn spoon which she has received from the keeper into the rice and raisins at the east side of the dish, being careful to include one raisin with the portion of rice dipped up with the spoon. Holding the spoon in her right hand, she extends it to Friday across the pan and Friday, without touching the spoon with either hand, sucks the contents from the tip of the spoon. While doing this he reaches out his right hand and strokes the inner side of Lizzie White Plume's right forearm, from the crook of the elbow to the wrist, four times. A portion of rice and a raisin is now

dipped from the south side of the pan with the spoon and Friday consumes it as he did the first spoonful, stroking Lizzie White Plume's right forearm four times while so doing. The third portion of this food is taken from the west side of the pan and is consumed in the same manner and following the same ritual as the other two portions. The fourth portion of one raisin and some rice is taken from the north side of the pan and is likewise consumed by Friday while stroking Lizzie White Plume's forearm four times. The fifth and last portion is taken from the center of the pan and is consumed with the same ritual as the other portions. Each mouthful must be sucked in from the spoon in such a manner that the spoon is cleaned of its contents. "He who covers the Pipe" now takes his place before the pan and is fed in the same manner and goes through the same ritual as Friday, and the rest of his party follow him in turn. This is the only food eaten during this ceremony by those who have received the paint. The feeding with the rice and raisins of the party of "he who covers the Pipe" is "all the same as communion," and the stroking of the arm of Lizzie White Plume is to draw strength (Friday). The keeper appears to enjoy the efforts of "he who covers the Pipe" and some of his party when attempting to eat from the horn spoon. None were very expert at it except Robert Friday.

THE FEAST

Lizzie White Plume now takes dishes and cups from a place behind her on her left and passes them down the line to all those persons present who are entitled to eat the feast. These include all in the tent except Friday and "he who covers the Pipe" and his party, who have received the paint. The food is then distributed, all taking whatever they wish, and using their pocket knives as eating utensils. The tea and coffee are served in the cups; the soups and gravy are not touched. The fruits are partly consumed. During the meal there is no conversation, and the pipe with the black stone bowl which Friday brought in is passed and smoked. As previously noted, this is the only occasion where it is considered proper among the Arapaho to smoke a pipe during the course of a meal (Friday). Friday and "he who covers the Pipe" and his party look on during the meal and smoke.

At the conclusion of the meal the keeper, his assistants, the helpers, and the Southern Arapaho visitor take what food they have left and tie it up in handkerchiefs to take home to their families. They do this, not on account of the food itself, but because the food has been blessed and offered to the four directions, the above, the earth, and the Pipe, and is therefore holy. Whoever eats this food is blessed, and receives health, long life, and good luck (Friday).

DISTRIBUTION OF FOOD

A discussion now follows, led by the Pipe keeper, in which some of the assistants and helpers join, as to who should receive the balance of the food. The five helpers and the Southern Arapaho guest take this occasion to thank "he who covers the Pipe" for the opportunity he has afforded them of attending this feast and ceremony. The Southern Arapaho guest is particularly sincere in his thanks, as he says he had never expected to look upon the Flat Pipe; that few Arapaho had ever seen it; that fewer still had given the ceremony and the feast; that he had just arrived after a 3-days journey by bus from Oklahoma, where the Southern Arapaho lived; and that now he could, when he returned to his people, tell them that he had looked upon the Flat Pipe.

It is finally decided to give the remaining food to four families, and their names are called out, summoning them to the tent. The women of these families come in and select such food as they wish and take it away with them. There is still some food remaining, which Luke Smith distributes, taking it to the door of the tent and handing it to certain women who come up to receive it. While the food is being distributed Lizzie White Plume takes the dish of rice and raisins before her, and the horn spoon, and after offering a portion of the dish, by placing a morsel upon the ground, proceeds to eat. When she has taken what she wishes, she passes the dish and spoon to the keeper on her left. He likewise offers a morsel on the tip of the spoon by placing it upon the ground in front of him, and then partakes of the dish. The dish then travels up the line to the left, the assistant, helpers, and the Southern Arapaho visitor eating from it as it comes to them. There is no other formality in the eating from this dish than the preliminary offering of a morsel by placing it on the ground, which has been noted. The dish is finally emptied by Yellow Calf, who sits on the north side of the tent, nearest the door. He passes the empty pan outside the door of the tent and the horn spoon is handed back down the line to Lizzie White Plume, who cleans it and hands it to the keeper. The keeper puts it back in its bag. All dishes, cups, and food containers are now passed outside the tent.

THE OPENING OF THE FLAT PIPE BUNDLE

Luke Smith leaves the tent and procures a live coal, which he brings in on an incense paddle and puts at the place of the smudge. Oscar White takes from the small leather bag a pinch of the incense, composed of cedar and castor. He holds it in his right hand, between the tips of his thumb, index, and middle fingers. He makes five feints with it over the catlinite pipe which lays before him, and then five feints over the live coal, meanwhile muttering a prayer. He places the incense on the live coal.

The Pipe bundle is hung from the four poles attached to the west tent pole in what appears to be an old saddlebag. The saddlebag has a fringe of red and white beads around its edge. The bag is enclosed around the bundle, and is secured by a leather strap with a buckle. An iron ring at one end of the strap serves to attach the strap to a leather thong. The other end of the thong is tied to the point of intersection of the four poles. The bundle is thus slung from the poles. The bundle is over 2 feet long and about a foot thick. From the north end of the bundle, as it hangs, five sticks protrude from under its outer wrapping of blue felt cloth. Eagle feathers are attached to the ends of these sticks. These feathers attached to their sticks are called the headdress of the turtle. The mouthpiece of the Pipe is called the head of the turtle (Friday). As the bundle hangs the mouthpiece of the Pipe, or head, points north, and is located under the headdress of the turtle. The bowl of the Pipe points south.

Rising from his place at the keeper's left, Luke Smith unties the thong which secures the bundle to the intersection of the four poles and takes the bundle down. He removes the saddlebag which acts as a cradle in which the bundle is slung, and places the bundle directly in front of the Pipe keeper. The bundle lies between the keeper and the catlinite pipe. The saddlebag is placed near the west wall of the tent, to the left of the keeper. All present are now very silent and attentive. Luke Smith removes the five sticks to the ends of which the eagle feathers are attached and which form the headdress of the turtle, and places them behind him, near the west wall of the tent. These sticks were drawn from between the outer wrapping of the bundle and the next wrapping. The outer wrapping of the bundle is secured by five rawhide thongs. These thongs are now untied by Oscar White and Luke Smith, and when removed are placed to one side. The outer wrapping is allowed to fall open and is not removed from under the bundle. The same holds true of all the other wrappings of the bundle, which are opened but not removed. A second wrapping is exposed by the opening of the first wrapping. It is of blue felt cloth like the first, and is tied in place by a long hair rope. The rope ends in a noose, which is secured around the bundle at its south end, or over the bowl of the Pipe. The rest of the rope is wound tightly around the bundle in five or six turns. Luke Smith unties the rope, unwinds it from around the bundle, and places it to one side. The second covering is thus allowed to fall open, and is not removed from under the bundle. By this time Luke Smith is perspiring considerably. The opening of the second wrapping discloses a third wrapping of red felt. This is tied in place by an ordinary piece of rope, which ends in a noose. The noose is around the south end of the bundle, over the bowl of the Pipe, and is then wound tightly around the bundle in five turns. This rope is removed from the bundle

by Luke Smith and is placed to one side. The red felt cloth is opened but is not removed from under the bundle. A wrapping of yellow felt cloth is now disclosed, which is not secured in place by any binding. This is simply spread aside, disclosing the next wrapping, which appears to be composed of two wolf or coyote skins. These skins seem to be very old, the inner sides of the skins being deeply grooved or cracked, the hair being of a yellow tinge but in a good state of preservation. Information about the animals that furnished these skins, the history of the skins and of the other wrappings of the bundle, can only be told at night to a person making the proper 3-day fast when acquiring the story of the Pipe and other information relating to it (Friday). All matters pertaining to the history of the Pipe, its ritual, and the objects connected with the Pipe, can be spoken of only at night, and never in the daytime. In the old days, when the Pipe was smoked, it could be smoked only at night (Friday).

When the skins are unfolded Lizzie White Plume and several of the helpers bow their heads. The Southern Arapaho visitor and other helpers and "he who covers the Pipe" and his party are watching the proceedings with close attention. All those in the tent are very serious. The keeper now wipes his eyes, as though wiping away tears. The opening of the two skins discloses a wrapping of black silk. This in turn is spread apart, disclosing another wrapping of flowered silk. When this wrapping is spread apart, another wrapping of yellow silk is disclosed. This wrapping is carefully spread apart, disclosing the Flat Pipe, which is now resting on all of its wrappings.

As it lies in the bundle the bowl of the Flat Pipe points south, and its head, or mouthpiece, points north.

DESCRIPTION OF THE FLAT PIPE

The Flat Pipe is all of one piece. It is not divided into sections or parts. It appears to be made of stone, which resembles in color a yellowish sandstone, with a tinge of red.[5] It looks narrower and smaller when laid in its wrappings than it does when removed from the bundle. Viewed as it lies in its wrappings, it looks very flat. The Arapaho say the Flat Pipe is of stone (Shave Head; Friday; also Mooney, 1898, pt. 1, p. 242). Dr. Tyler, who was permitted to lift the Flat Pipe, says it is made of wood (Fontenelle). A close scrutiny of the Pipe shows no wood grain, and on being touched with the sole of the foot later in the ceremony it did not feel like wood. Fontenelle, who also saw the Pipe and touched it with his foot, believes that the Pipe is not made of wood. The color of the Flat Pipe is its natural color. It has not been painted (Friday).

[5] It appeared to be reddish yellow in color to two observers present at the ceremony. To the author it appeared a light mahogany in color. Robert Friday says the Flat Pipe is slate colored, but he examined the drawing of the Flat Pipe submitted with this paper, and appeared satisfied with it insofar as it showed the shape of the Flat Pipe.

When the Flat Pipe is removed from its bundle its appearance at first glance is one of great weight and crudeness in execution. It looks clumsy and awkward. The bowl seems of great size and weight in comparison with the stem. The Pipe looks thick and heavy. But a closer examination reveals that the carving of the Pipe is excellent and its lines are graceful. The head, near the mouthpiece, which is the head of the turtle, is well executed, as are the eyes in the head. The curve in the body, which is the stem of the Pipe, is well modeled and graceful. There is an overhanging lip around the outer rim of the bowl of the Pipe, and the bowl when looked at from above is square.

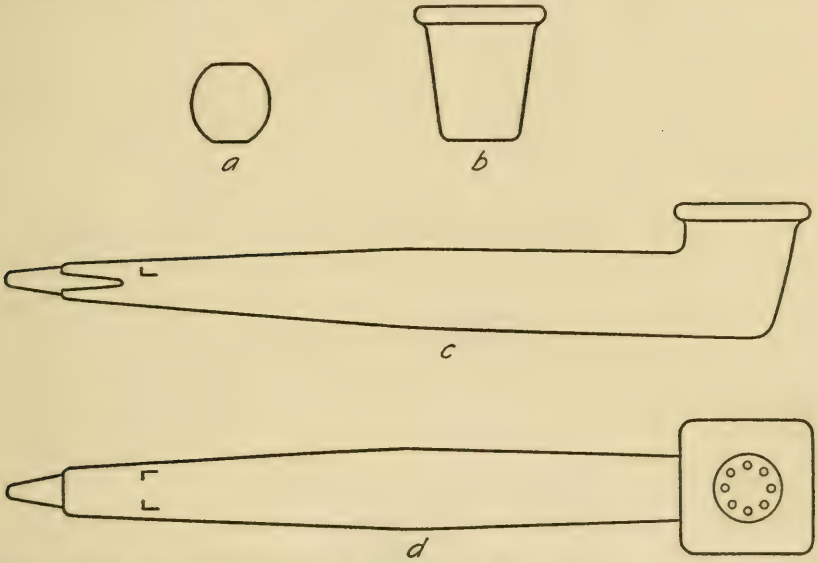


FIGURE 10.—Flat Pipe, Northern Arapaho. *a*, Section through stem. *b*, Front view of bowl. *c*, Side view of pipe. *d*, View of pipe from above. Description: Pipe is in one solid piece. Gives appearance of great crudeness, weight, and bulk, but is handled by its keeper as if very light. Color is light yellow. Dr. Tyler, missionary, who lifted it, says it is made of wood. Indians say it is stone. It looks like stone. Shows no grain. Might be tufa or pumice, or some like material. Friday says it is sealed with tallow. There are small brass-headed tacks around edge of sealing substance near lip of bowl.

The opening in the bowl is sealed with a substance which is of the same color as the rest of the Pipe, and around the outer edge of this seal the heads of a number of brass tacks are embedded. These heads are very small. The Pipe is about 15 inches in length, by estimate. It is said by some to be about a foot long (Shave Head; Friday; Fontenelle). The keeper, who is an old man, and seems not very strong, lifts the Pipe as though it were very light.

The head, or mouthpiece, of the Pipe looks more like the head of a duck than the head of a turtle. But it is insisted that it is the head of a turtle (Friday). An Arapaho named Adopted has stated that the head of the Flat Pipe resembled the head of a duck (Dorsey and Kroeber, IV). A drawing of the Flat Pipe, made from memory on the day of the ceremony, is attached to this account (fig. 10).

INCENSING OF THE FLAT PIPE

Now the keeper lifts the Flat Pipe from its bundle, holding it carefully and reverently with both hands. His right hand is extended forward, under the Pipe near its bowl, and his left hand is holding the Pipe under its stem, near the head of the turtle. In lifting the Pipe from the bundle it is observed that neither the head of the turtle nor the bowl of the Pipe is either elevated or depressed, but the Pipe is held parallel to the ground. The Pipe is now held with the bowl forward, and away from the body of the keeper, the mouthpiece being next to the keeper's body. The bowl is held in the smoke that is rising from the incense smudge. It is moved through the smoke five times. This is done with great deliberation and care, so there is ample opportunity to obtain a good view of the whole Pipe. Lizzie White Plume, Luke Smith, and some of the helpers are now sitting with heads bowed. The others are gazing intently at the Pipe. No prayer is uttered audibly by the keeper.

Although the tent flaps are open there are no curious spectators around the door. This has been true thoughout the entire ceremony. Only those come to the tent who are summoned there. Others stay away from the tent. A couple of boys who chanced to pass close to the entrance earlier in the ceremony and looked in over their shoulders as they passed were ordered away by Yellow Calf, and left immediately. One, and sometimes two, women have been sitting near the door, outside the tent near its northeast corner, throughout the ceremony, and appear to be keeping a lookout. But none of the Indians have come near the tent except those who are called for.

After the bowl of the Flat Pipe is incensed the keeper lays it back on the bundle. But now it is laid with the bowl to the north, and the mouthpiece, or head of the turtle, to the south. In this position it lies parallel and bowl-to-bowl to the catlinite pipe which is between the Flat Pipe and the smudge. It is not observed when the Pipe was turned to its new position whether it was swung around clockwise or not. It was observed, however, that the bowl of the Flat Pipe was always held away from the keeper's body, while the mouthpiece of the Pipe was always held next to the keeper's body.

TOUCHING THE FLAT PIPE

The Pipe keeper now beckons to Robert Friday to come forward. Friday is barefooted, as are the rest of the party of "he who covers the Pipe." Friday leaves his place and steps up on that part of the Pipe bundle which lies between the Flat Pipe and Oscar White, the keeper. He faces north. He steadies himself by grasping two of the poles that are used as a stand for the pipe with his left hand. These poles are lashed to the west tent pole, slanting south at an angle from the tent pole, and lie flat against the west wall of the

tent. Friday now places the sole of his bare right foot on the Flat Pipe, down near the mouthpiece or head of the turtle. He lifts his foot and then places it down on the Flat Pipe on the stem near the head of the turtle. He lifts his foot and then places it on the stem of the Pipe near its bowl. He then places his foot on the bowl of the Flat Pipe. In each instance the foot is placed down flat and squarely on the Flat Pipe. The right foot is then placed on the Pipe bundle just west of the Pipe bowl, and Friday then releases the grip of his left hand on the two poles with which he has steadied himself and brings his left foot up beside his right foot. To do this involves almost stepping over the lap of the keeper. Friday then turns to his right, around the head of the Pipe, and turning a second time, faces south. He then returns to his seat, keeping the incense smudge on his right and between himself and the keeper when so doing. "He who covers the Pipe" now steps forward and follows the same procedure in placing his right foot on the Flat Pipe as did Friday. He is followed in turn by the rest of his party, men and women, in the order that they are seated along the south wall of the tent. Friday, "he who covers the Pipe" and his party now put on their stockings and shoes once more. The five helpers and the Southern Arapaho visitor, who sit along the north wall of the tent, now remove their footwear. They come forward each in turn, crossing to the south of the tent, and keeping the incense smudge on their right, between them and the keeper. They then turn north, step up to the Pipe bundle, touch the Pipe four times with the sole of the right foot, following the same procedure just described, and return to their places. Oscar White, the keeper, Luke Smith, his assistant, and Lizzie and Pete White Plume do not go through this ceremony, but remain in their places. While the Pipe is being touched Lizzie White Plume sits with her head bowed toward the Pipe.

Luke Smith now goes to the door of the tent and announces that all who wish to may come in and see and touch the Pipe. Within a very short time a large number of men, women, and children appear at the door of the tent. All are barefooted. They cross the tent in single file, crossing the tent along its south wall, in front of the party of "he who covers the Pipe." They then turn north, step on the Pipe bundle, touch the Pipe four times with their right foot as the others have done, and then turn to the right and leave the tent. It will be observed that they thus pass around the tent clockwise. There is no loitering around the door of the tent by anybody. The small children, who are unable, or do not know how to touch the Pipe, are lifted across the Pipe with the assistance of Luke Smith and of the women who bring them in. As they are thus lifted across the right foot of the child is pressed down on the Pipe four times, in the proper places, either by Luke Smith or the woman who has brought the child.

The purpose of this ceremony is to derive strength from contact with the Flat Pipe. Those who touch the Pipe four times with their right foot draw from the Pipe great strength, health, and long life (Friday).

The ear of corn, which is in the bundle, just below the Flat Pipe, is not taken out for this ceremony. Nor is "he who covers the Pipe" permitted to lift the Flat Pipe, or touch it in any other way than in the manner described. If the five sun shells had been presented to the Pipe keeper it would have been possible for "he who covers the Pipe" to actually lift the Flat Pipe (Friday).

WRAPPING OF THE FLAT PIPE BUNDLE

When all have touched the Pipe who wish to do so, Oscar White ifts the Flat Pipe carefully from the bundle, holding it as he did before, the right hand under the Pipe near the bowl and the left hand under the Pipe near the mouthpiece. He runs the bowl of the Pipe slowly and carefully through the smoke of the smudge five times. He then lays the Pipe back on its bundle in its original position; that is, with the bowl pointing south, and the mouthpiece, or head of the turtle, pointing north.

Each of the silk wrappings of the Flat Pipe are now carefully folded back over the Pipe and rewrapped in their turn by Oscar White. When he comes to the two skin wrappings it is again noticed that he wipes his eyes, as though brushing away tears. All are watching intently. The gesture of the keeper in wiping his eyes when unwrapping and wrapping the skins is believed to be no accidental gesture. He only wiped his eyes twice during the entire ceremony, and each time he did so was when touching these skins. The felt cloth wrappings are now each folded around the bundle in their turn, and their proper ropes and bindings brought out and each is secured around its proper wrapping. The same order is followed as when untying the bundle. Luke Smith ties the ropes, and is careful to secure them in place just as they were when the bundle was unwrapped, and to pull the ropes very tight. When the outermost cover is folded in place both Oscar White and Luke Smith join in tying the five leather thongs around it. After securing the outer wrapping Luke Smith takes up the five sticks which have the eagle feathers attached to their ends, the headdress of the turtle, and runs them carefully and one at a time in between the outer wrapping and the next wrapping of the bundle. The sticks are run in at the north end of the bundle and are put in far enough to leave some of the stick protruding beyond the end of the bundle, so that the eagle feathers hang free. The saddlebag, which is used as a cradle with which to hang the bundle, is adjusted next. There is some difficulty about this. The cradle is adjusted three or four times by Luke Smith before Oscar White is satis-

fied that the bundle balances correctly in the cradle. At this point Luke Smith is doing the work and Oscar White is doing the directing.

By now the tobacco and kinnikinnick mixture which Robert Friday has brought with him to be smoked in his black stone pipe has run out and the sociable smoking comes to an end. Luke Smith picks up the Flat Pipe bundle by the ring attached to the strap and ties it by a thong to the point of intersection of the four poles secured against the west pole of the tent.

COVERING OF THE FLAT PIPE BUNDLE

Oscar White now picks up the catlinite pipe brought in by "he who covers the Pipe." He takes it from the place where it has laid before him throughout the ceremony and hands it to "he who covers the Pipe." He holds the pipe in his right hand, bowl downward, and the stem slanted at an angle of about 45 degrees. The stem is slanted toward the keeper. "He who covers the Pipe" receives the pipe with his right hand and rests the projecting end of the bowl on the ground. The stem slants toward him, so that the mouthpiece is only a short distance from his lips. He holds the pipe with his right hand. Friday hands him a box of matches and "he who covers the Pipe" lights the catlinite pipe and draws on it to get it well lighted. Keeping the pipe lighted, he walks over to the keeper and sits on his heels before him. The keeper takes the lighted pipe and wraps around it the blue felt cloth offering which "he who covers the Pipe" brought in with him at the start of the ceremony. The offering is folded around the stem of the pipe. The pipe is now placed with the projecting end of its bowl touching the ground and its stem slanted toward Oscar White, the keeper. "He who covers the Pipe" grasps the pipe with his left hand down near the bowl, and outside the cloth offering, to hold the offering in place. The keeper grasps the pipe with his right hand, up near the mouthpiece, the hand being outside the cloth offering to hold it in place at that end of the pipe. The position of "he who covers the Pipe" is southeast of the keeper, he and the keeper facing each other. The keeper now takes four draws from the pipe, and at each draw "he who covers the Pipe" strokes with his right hand the inner side of the right forearm of the keeper, from the crook of the elbow down to the wrist. "He who covers the Pipe" now removes the felt cloth wrapping from around the pipe, being careful to do so in such a manner that it will not disturb the position of the pipe or the grip of the keeper on the stem of the pipe. "He who covers the Pipe" then unfolds the cloth wrapping, with its present attached, the bill pinned to the cloth being toward the Flat Pipe bundle. He then steps to the north of the keeper, and in between him and Luke Smith, who sits at the keeper's left, and stands close to the Flat Pipe bundle. Robert Friday stands on his left. He now carefully spreads the blue felt cloth, the bill pinned

inside so as to be next to the bundle, and lays it over the bundle and smooths it out. Thus he covers the pipe. "He who covers the Pipe" now lays both hands upon the pipe bundle, palms down, fingers extended and touching, and thumbs about 6 inches apart. He then bows his head and utters a silent prayer, of his own choice, for a few moments. Friday, standing on his left, also utters a prayer. "He who covers the Pipe" and Friday then return to their seats.

The keeper smokes the catlinite pipe and passes it to Luke Smith on his left. The pipe is smoked, passing it to the left, until it reaches Yellow Calf, who sits north of the door of the tent on the extreme left. When Yellow Calf has smoked the pipe is passed from hand to hand until it again reaches Friday. Friday smokes, and passes the pipe to his left, and it is smoked down the line to the left a second time until it reaches Yellow Calf, who finishes the pipe. The empty pipe is then handed along the line until it is taken by Oscar White. At this time several talks are made by Yellow Calf and others. At the suggestion of Friday, "he who covers the Pipe" makes a short address. All of the talks are made seated.

CONCLUDING CEREMONY

While the talks are being made Oscar White proceeds to clean the bowl of the catlinite pipe. He first places the pipe before him, the projecting end of the bowl on the ground, and the stem upright, but slanting toward him. Holding the stem with his right hand, he mutters a prayer, and rubs earth from the ground before him with the fingers of his left hand, and he strokes the pipe up and down the left side with the fingers of his left hand. This is done twice. He then holds the pipe with his left hand, and still praying, rubs the ground with the fingers of his right hand, and strokes the right side of the pipe up and down with the fingers of his right hand. This is done twice. The keeper then holds the pipe to his right and cleans the ashes carefully from the bowl and deposits them on the ground. The ashes are shaken from the bowl a little at a time. After shaking the bowl four times it is empty. The last ashes are removed on the fourth shaking. When the pipe is empty the prayer ceases.

A fresh coal is brought in by Luke Smith and placed on the smudge before the keeper. The keeper takes the incense, made of cedar and castor, and holding a pinch between the thumb, index, and middle fingers of his right hand makes five feints with it over the coal. He then deposits the incense on the coal. He now hands the empty catlinite pipe to "he who covers the Pipe." In handing it he holds it with his right hand, bowl downward and forward, and the stem slanted upward at an angle of about 50 degrees. The stem slants toward the keeper. "He who covers the Pipe" takes the pipe with his right hand and rises. He then holds the empty pipe with his

right hand forward under the bowl and his left hand under the stem near the mouthpiece. The bowl of the pipe is about level with the pit of the stomach. The stem slants to the left of the body and the pipe is held close to the body, the bowl slanted slightly downward. He now steps north, crosses over the incense smudge, then turns east and leaves the tent. Friday and the rest of his party follow him in order, each stepping over the incense smudge in front of the Pipe keeper. On leaving the tent the party turns south and breaks up just south of the tent.

The keeper, assistants, and helpers now leave the tent, with the exception of Luke Smith. Luke Smith takes down the Flat Pipe bundle from its place and unties the four poles from which the bundle is hung. He places these under his arm with the bundle and returns with them to the dwelling place of Oscar White.

This concludes the ceremony, which began at 11 o'clock in the morning and ended at 3 o'clock in the afternoon, consuming 4 hours.

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INFORMANTS

Fontenelle, Victor.
Friday, Robert.
Friday, Mrs. Robert.
Roberts, Dr. John.
Shave Head.
Smith, Luke.
White, Oscar.

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The Caribs of Dominica

By DOUGLAS TAYLOR

103

CONTENTS

	Page
Introduction	109
Descriptive and physical	112
Social and sexual	115
Childhood: Games and pastimes	122
Shelters, huts, and houses	125
Basketry	127
Thread, twine, cords, and ropes	133
Fire and light, gums, wax, resin, oils, and pigments	134
Other domestic requisites and their uses	137
Canoes	140
Fishing	143
Cultivation	145
The high woods	147
Legend and tradition	149
Language and vocabulary	152
Index	197

ILLUSTRATIONS

Plates

		Page
13.	Basket making	160
14.	*a*, Hut in the Reserve. *b*, Refreshments with bamboo for beaker. *c*, Launching a canoe. *d*, Mixed types: Mother and child	160
15.	*a*, Working on canoe before hauling. *b*, Hand adz at work on interior of canoe. *c*, Preparation for hauling canoe	160
16.	*a*, Drawing "la pite." *b*, "La pite" fiber drying. *c*, *d*, Spinning the twine	160
17.	Carib types: *a*, Man. *b*, *c*, Girls. *d*, Woman	160
18.	Dominica Carib man and petroglyphs—Guadeloupe	160

Text Figures

11.	Map of Carib Reserve	113
12.	"Attrappe-la-main" or "wife leader"	125
13.	"Musique"	125
14.	Scaffolding for karbé before covering	126
15.	Muinan before thatching	126
16.	Structure for kitchen	126
17.	Carib pannier and cover	129
18.	Valise	129
19.	"Panier cocaille"	130
20.	Cassava sifter	130
21.	Cassava squeezer	131
22.	Fan	131
23.	Shoulder basket	132
24.	Game basket	132
25.	Fish pot or landing net	133
26.	Roll-up mat	133
27.	Spinning fiber twine	134
28.	Fire drill	135
29.	Tinder box, engraved and colored with roucou	135
30.	Cassava grater and cassava canoe	137
31.	Platine with cassava bread baking under shelter	138
32.	Cassava palette	138
33.	Boucan or Carib barbecue	139
34.	Cane press	140
35.	Carib canoe with raised sides, masts, and sails	143
36.	Spring snare for game birds	148
37.	Fall trap	148

THE CARIBS OF DOMINICA

By Douglas Taylor

Introduction

As the last direct descendants of those first-found "American Redskins," the Island Arawak and the conquering Island Carib, the Caribs of Dominica possess an unique historical and sentimental interest. Today, in fact, they are the only indigenous "Indians" to be found in all the West Indian chain between the Guianas and Florida. Owing, no doubt, to the rugged nature of their homeland, they have outlived their cousins of the other Caribbees (with the partial exception of St. Vincent) by some 200 years. But at last their course is run, and they are fast disappearing. Of their story little is known and less written; and it is with the purpose of recording, before it becomes too late, something of this vestige of a once virile and powerful people, that my own attempt at knowing them has been made.

Dominica was discovered on Columbus' second voyage, and was so named by him for its being first sighted on Sunday, November 3, 1493. In a letter dated 1494, Diego Chanca, the fleet's doctor, gives its native name as Cayrë, though this may have been a confusion with the Arawak term for island or land in general—kaera, as in Turukaera for Guadeloupe, and Iwannakaera for Martinique. However, the population was then of too warlike a nature, and the Caribbees of too little value in the Spaniards' eyes, to warrant any serious attempts at settlement. It is therefore not until well into the seventeenth century that we get any reliable reports—this time from the French missionary fathers—of the Carib Islanders.

Father Raymond Breton spent nearly 25 years among the Caribs of Dominica, and wrote subsequently a Carib dictionary, a grammar, and a translation of the usual prayers, together with a catechism in their tongue. Under the various headings of the dictionary he gives a concise description of the local beliefs, customs, and arts, as well as of the flora and fauna of the island, domestic utensils, weapons, etc. While he deplores what he naturally considers the Caribs' moral laxity in certain respects (drink, women, and especially their insensibility or indifference to the call of religion; he succeeded, he himself tells us, during his 25 years of zeal, in converting only "quelques enfants

sur le point de la mort"), he shows a general liking for his hosts, calls them his friends, and says that theft and lying were unknown to them before the advent of the Christian Europeans—a statement confirmed by La Borde, Rochefort, and Labat. Rochefort further says that while the Caribs of St. Vincent and Dominica were slave owners they never evinced the same cruelty as was common among the whites, but treated their slaves, except for the obligation of work, more like their own children than anything else. Breton gives the native name of Dominica as Wàïtukùbuli.

The treaty of Aix-la-Chapelle (1748), inasfar as it left the then unsettled island of Dominica "to the undisturbed possession of the native Indians," was violated by the English only 12 years later, on the pretext that the French had made establishments on the island. From then on until the end of the century these two pillars of civilization ousted one another from their respective nests as often as and whenever opportunity offered; and we can well imagine that between them "the native Indian," if not exterminated, was driven more and more into the fastnesses of forest and mountain. Writing in 1795, Atwood, in his history of Dominica, mentions as still prevalent the Carib custom of head deformation, and the skill with which even the children used bow and arrow. Even the memory of both is now lost, though as late as 1862 the Dominican Caribs sent the following articles to the London Exhibition: A "nest" of 12 baskets, bows and arrows, hebichet (manioc sifter), rattles, powder flasks, dishes.

Although I know of no records for that time, it is probable that the first half of the nineteenth century was the period of the Dominica Caribs' final conversion to Christianity, and of the greatest decay in national language, tradition, and custom. An old Carib still living told me that previous to the middle of the last century there was no church in or near the Reserve, but that some Caribs used to go to Marie Galante in their canoes to attend mass, or to have their children baptized.

In 1877, and again some 15 years later, Salybia, around which the Caribs were already concentrated, was visited by the American ornithologist, Frederick Ober, who appears to have been the first person since the middle of the eighteenth century to take the slightest interest in this last isolated island tribe. It is noteworthy that he is still remembered in the Reserve today by men and women who could have been little more than infants at the time of his visit. Ober's "Camps in the Caribbees" is a travelog and, as such, unsatisfactory as to ethnological data—as much by lack of detail as by the constant suspicion of inexactitude, or rather, poetic license. I have spoken to several sons and daughters of Ober's two guides at the time of his first visit, and none of them claims to remember having heard such a story as that told by Ober of his encounter in the forest

with the mad chief who spoke only Carib. Nevertheless, owing to the Carib's peculiar reticence, as much with one another as with strangers, this does not exclude the possibility of such an encounter having taken place. Likewise, according to present-day Caribs, his story of the army of coast-bound crabs met with in the mountains is either grossly exaggerated or refers to a small species known as the "soldat" or hermit crab—the "cirique" crab disliking the sea, and the other, black or white, land crabs being rarely found on the windward coast, or in the regions mentioned. Ober found a number of older men and women in Salybia who spoke an Indian dialect as their mother tongue, and even noted the persistence, in that late day, of the differentiation between men's and women's languages. He mentions the snake legend, and speaks of finding archeological remains in St. Vincent, but not in Dominica. (I have heard of, though not seen, old stone implements and "rocks with writing" on the wooded heights between the Akayu River and the Araturi Ravine.) At the time of Ober's visits the so-called reserve was somewhat smaller than at present, but there were other Carib lands and settlements at North End (between the Pegoua and Marigot), Wesley (La Soie), Calibishie, Penville, Morne Caraïbe, and Délice.

In June 1903 the Carib Reserve in its present form was created by decree, and its boundaries delimited as extending from the Akayu (or Raymond) River (some say the Araturi Ravine, and there seems to be no existing document to settle the matter) to Kuària (or Big River), a dry ravine, along the coast, inland, up the latter ravine to the ridge, and hence down the Ravine Pomme to the Pegoua River, which the boundary then follows up to Deux Branches, whence it cuts across in a straight line to the Akayu River. This decree made no attempt to define the status of the reserve, nor of its inhabitants and their chief. In point of fact, the Caribs merely continued their traditional custom of electing from their numbers a chief or headman (ùbutu), whose duty it is to advise and direct members of the tribe and to settle such disputes as may arise among them. For some years prior to 1930 this institution received a degree of official recognition, with remuneration to the extent of 10 shillings ($2.40) a month. In return for which the local government held the chief responsible for order within the reserve generally, and for the upkeep of the coastal bridle path through Carib territory.

In September 1930, a few days after the hurricane, and a month after my first visit, the so-called "Carib War" took place. Five negro policemen invaded the reserve, seized some tobacco and rum they alleged to be contraband, and made two arrests. Then, a dispute arising, they opened fire on an unarmed crowd of men, women, and children, killing two and injuring others. The Caribs in their turn set upon the police with stick and stone and chased them from

the reserve. The upshot of this episode was the discontinuance of the office of chief. The following gleanings, gathered during my often hasty visits to the reserve, half a century after those of Ober, represent fairly well what remains of the Carib language and culture.

Descriptive and Physical

The present Carib Reserve extends along some 8 miles of rugged, irregular coastline in the middle of Dominica's windward side. A series of rocky streams flow from the hills and enter the sea by way of deep wooded ravines and small inlets 2 to 3 miles apart. After a few hours' tropical downpour, they "come down," to use a local expression, changing for the time being into roaring and impassable torrents. Between, rounded shoulders or spurs rise 200 or 300 feet above the shore, and run back up to a central mountain ridge some 3 miles distant from and 2,000 feet above the Atlantic. From here, the land falls sharply in woodland and provision grounds to the valley of the Pegoua River, which forms the inland or western boundary of the reserve (fig. 11).

In all, there may be upward of 3,000 acres, but not more than a tenth of this is capable of any sort of cultivation, by far the greater part being nothing but rock and tuff. A good wide bridle path of red clay, extremely slippery in wet weather, winds in and out near the coast, up and down the steep sides of the intervening spurs. The Caribs' dwellings, though usually well hidden by trees and shrub, are seldom far away from this road. There are but two settlements: one, Bataka, being 15 minutes' climb from Kuària (or Big River), the northern boundary; the other, St. Cyr, adjoining the road high above the Salybia River. Elsewhere their dwellings are scattered along the hillsides or in the ravines, wherever their owners' fancy or convenience has placed them, some close together, others more than half a mile from their neighbor.

Disease, malnutrition, and miscegenation—results of the American Indian's unfortunate but very real inadaptability to social and economic conditions other than his own—have reduced the tribe to about 400 souls, of whom less than a quarter are entirely free from negro blood.

Physically, the Caribs of Dominica (the product of a cross between the fierce Carib invader and the docile Arawak Islander in pre-Columbian days) are a small though sturdy people, the men averaging around 5 feet 3 inches and the women about 5 feet. I have seen a few decided dolichocephals, even among the purer types, though the latter are usually subbrachycephalic (especially the women), with an index of between 79 and 81. They have straight black hair of coarse texture, which acquires in some a reddish tint through exposure to the sun's rays. Their foreheads are high and broad, their cheekbones

wide, their chins well rounded. Mouths and lips are usually small or medium, the noses straight, and sometimes slightly flattened. Their eyes are rather small and deep-set, long and narrow (with the Mongoloid or epicanthic fold), though not as a rule oblique, and are fringed with long silky lashes. Their ears are large, long, and often lobeless, their feet small, broad, and extraordinarily high-arched.

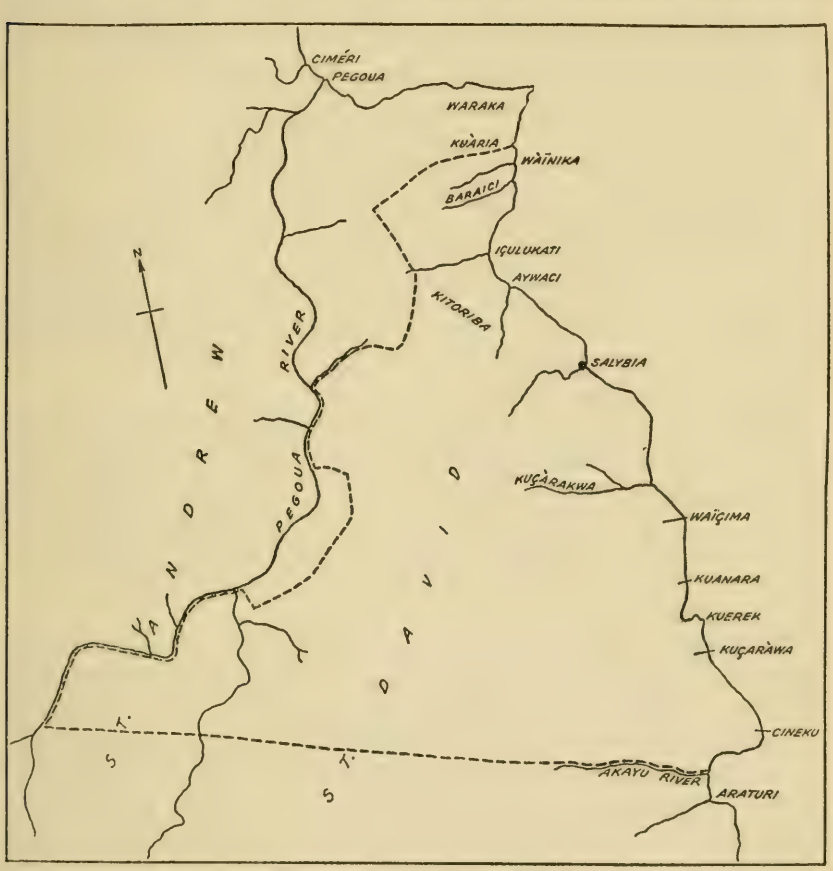


FIGURE 11.—Map of Carib Reserve.

The girls are round-faced, plump, broad-shouldered, and remarkably straight in the loins. Men and women alike have little or no body hair. Their hue varies (apart from reasons of blood admixture), but is always distinct from any Eurafrican blend, being of a light coppery or "feuille morte" tinge, sometimes likened to dried cinnamon.

Like so many others of his race, the Dominica Indian is reticent by nature, sensitive, and quick to take offense, and given to occasional moods of melancholy and unreasonableness. Indifference, one of his best-known traits, coupled with innate shyness (the patois term "couquia" expresses what I mean here much better than our

"shy." Originally it was the name for a kind of crab which, when it cannot escape unobserved, will curl up and remain perfectly still, so that by no amount of scrutiny or poking can it be made to show the least sign of life) undoubtedly has been one of the principal causes for the bolder, more hot-blooded negro's relatively greater success as a lover, and for the increasing proportion of mixed blood in the reserve today. It has, moreover, contributed to the decay and disappearance of language, legend, and custom; and renders doubly difficult today the task of eking out such vestiges of these as still remain.

The war feuds of other days have been replaced by a multitude of petty jealousies and hatreds, but the Caribs still resort to sorcery and piaï as instruments of injury and revenge. Though, or perhaps just because, the boutou (war club) of yore has gone forever, that other no less formidable weapon, the tongues of the womenfolk, rages more mercilessly than before. In vain one looks among his present-day descendants for that fierceness which is said to have characterized the Carib of old, earning for him a symbolic association with the Malfini, or Mansfénix hawk.

Much has been made of the Indian's custom of walking in single or Indian file, and this is as true today in Dominica as ever or elsewhere; but it seems to be the natural outcome of a habit acquired of necessity on forest trails rather than a racial tradition. More significant, perhaps, is the Indian's peculiarly emphatic, stumpy, forward-falling gait, which, in a manner, is reproduced in his speech, character, and way of life.

The Caribs' love of travel, in an island where nine-tenths of the population never move without good reason outside a radius of half a mile from their homes, is perhaps worth mention. Few are the men of the reserve who have not at one time or another visited one or all of the neighboring islands of Guadeloupe, Marie Galante, Martinique—and that with the prospect of no more than a wine or rum debauch if lucky, and a term of imprisonment if caught. Others have left the country for Guiana, Bolivia, or Cuba, as opportunity offered, in search of adventure rather than fortune. Men, women, even children, think nothing of a 35-mile tramp, over mountain track and through virgin forest, to Roseau, the capital, for the sole purpose of selling a few baskets or of buying a few yards of sail cloth or a pound of nails. Their business concluded and their money spent, they will take the homeward road immediately and, if only there be a moon to guide them, march all night through to arrive home by daybreak.

Whether cause or effect of poverty, I do not know, but the Indian's proverbial ignorance of the value of money remains as much a fact as his general indifference. In Dominica, at least, he has no other

scale of worth than his present want—I do not say need, advisedly: I have seen a girl starve her baby in order to procure it a baptismal robe it would use only once. When he has made up his mind to buy or sell, the worst bargain in the world will not deter the Carib, nor persuade him to await a better opportunity. On the other hand, he will let you vainly wait months for a basket or some other article you have ordered from him, and appear dissatisfied, if and when he finally condescends to bring it, with the price originally set by himself.

For a number of reasons I have not been able to push my inquiries into Carib life and lore—and especially with regard to the archeological material, which I believe to be plentiful—as far as I should have wished. Perhaps the same petty jealousies of which I have spoken prevented some members of the tribe from communicating to me—or at least prompted them to demand exorbitant sums for their only possibly valuable information—all that they knew of their nation's language and legend. Less excusable is the crass ignorance of many Creoles, white and colored alike, in a position to know better, as to the nature and aims of ethnological research. The ridicule and suspicions of such individuals in a pseudo-civilized community inevitably render the student's task all the harder. On the other hand, I am profoundly grateful to those others with whom I have come in contact, of whatever color or race, for their sincere collaboration and loyal friendship.

Social and Sexual

Social organization, in as far as it can be said to exist at all, is extremely slack among the Caribs today, and appears to have been so always. Previously there were two chiefs in Dominica: One for the windward side, another for the leeward side of the island, but their authority was never more than of an advisory or paternal nature, even where it was combined with that of magnétiseur or sorcerer. Even the punishment of crimes committed within the tribe was left to the individuals or family concerned. The chiefs, though often of the same family, seem to have been chosen by common consent for some recognized superiority or sagacity (ordeals of pain or hunger endurance were common) rather than by hereditary privilege. In war time, on the contrary, supreme authority was given to another commander, or war chief, who usually led the combined armies of Dominica and Guadeloupe. Today, in spite of certain local prejudices and jealousies, the only social unit which can be said to subsist is the family.

No puberty ceremonies have survived. Nevertheless, girls and women maintain a certain seclusion at their menstrual periods, especially the first, and do not leave the house, even to bathe in the river or for their personal necessities. Were they to do so, it is said

that the "fresh" odor of their blood would cause the "dog spirits" to follow and attack them and any other person who might take the same track. Actual contact with such blood would bring about local swelling, while any man so foolish as to have connection with a menstruating woman would inevitably suffer from severe backache and general debility for some time after. In Creole patois, a woman's menstrual period is known as her moon, and the Indians, formerly at any rate, held the moon to be responsible for this "sickness."

Chastity is not considered of importance in the unmarried, whether man or woman, as is evinced by the prevalence and good treatment of "outside children" in married households. Without demur, a husband will often support, together with his own legitimate offspring, three or four of his wife's children from various prenuptial lovers; his own illegitimate progeny, if any, remain with their mother. Conjugal infidelity, while regarded in a more serious light, seldom, if ever, leads to a permanent separation or estrangement.

Love, as we understand it, is not recognized, although instances of it no doubt exist. Carib girls usually are taken, soon after if not before they reach puberty, by surprise attack, although not by force. By that I mean (and I understand the word *wärikad* to mean) that a young man will watch for an opportunity and ambush a girl when she goes to the river or into the woods alone. If discovered, he will chase, catch, and hold her by force, although he will not resort to rape if she still resists him. The curious thing about this is that in no case will the girl shout or call for help or otherwise betray her presence to anyone passing near, when once she is caught; while, on the other hand, even should she submit, she probably will go straight home and tell her mother, knowing full well that in all likelihood she will receive a beating in consequence. This attitude may be explained, perhaps, by the Carib girl's profound sense of shame (see word *couquia*), combined with deep-rooted inherent passivity.

The aims of marriage are practical, the main reason being the desire to found a family as an independent economic unit. No established custom with regard to marriageable parties is recognized today, but marriages between crossed cousins (a girl with her paternal aunt's son, a boy with his maternal uncle's daughter) are still common. Although no prenuptial tasks are demanded of the Carib youth today, certain restrictions are sometimes placed on him during his period of courtship, which, for example, may be limited to a monthly or bimonthly visit.

Weddings (as also baptisms) are celebrated according to the rites of the Catholic Church, and are followed by a dance and drinking bout in the home of the bride's parents, where the couple henceforth take up their residence until such time as they are able to build and establish a home of their own.

It is not usual for husband and wife to spend the whole night together—each retires to sleep on a separate couch or mat.

Rochefort mentions the fact that the Island Carib of his day never touched a pregnant woman. This is still true, be the woman his own wife or another.

I have heard a married woman protest that she was not normally pregnant, but that a piaï had put a tête-chien (dog-headed Dominica constrictor) in her belly. On the other hand, legend reports this snake as having had connections with women in the old days.

Parturition is accomplished in a squatting or sitting posture (in the old days by straddling a hammock split lengthwise down the middle), and with the assistance of some old sage-femme, whose manipulations and remedies are of very doubtful benefit to the patient. After giving birth, the Carib woman remains confined to the house for 40 days; i. e., until her "retour de couches."

Suckling by the mother is general, and often of long duration. I came across a little boy of about 4 years, who, after helping his elder sister to carry up water from the river, used to claim and obtain refreshment from his mother's "tote-totes" (breasts; children's speech, possibly from Carib "totaka," to support). In the all-too-frequent event of a woman dying in childbirth, the maternal aunt or even the grandmother will suckle the infant. I was told that any woman who once has borne, irrespective of age, may induce lactation by the use of certain herbs, some applied locally, others taken internally. I was unable to learn their names, with two exceptions: the ripe fruit of the corossol (*Anona muricata*) and a berry they call kurupùm (*Renealmia exaltata* (?)). Whatever the cause, I myself witnessed the case of a woman whose youngest child was a grown man, giving the breast with apparent success to her niece's newborn baby.

Clever as the Carib woman would seem to be in inducing the rise of her milk, so her attempts to get rid of it appear clumsy to us. When the time for weaning has come, her usual procedure is to milk herself onto a fire stone, or, better still, into the nest hole of a species of large black ant, known locally as fourmis mordantes.

The naming of infants has, nowadays, become confused with Christian baptism, though the baptismal name itself is rarely, if ever, used in after life, its place being taken by another, chosen concurrently. Despite the priest's protests, baptism is delayed until at least one month after birth—that is, until the septa of the cranium have joined. The choice of names falls to the godparents—to the godfather in the case of a boy; to the godmother in the case of a girl. Carib names, such as Wàkanik, Màruka, Cimanàri, are known to have been used as recently as 20 years ago, but no living example remains. The nonbaptismal name now takes their place. Most families bear surnames, or, as they call them, "titles"—relics, in all

probability, of their forefather's conversion and of the name of his white godfather. Such today are Dauville, Lucien, Viville, John, Darroux, Benjamin, etc. But already these names are falling into disuse and being forgotten even by their bearers, who designate the individual by attaching the patronymic to the name—so, Norbert John, the son of John Jules, the son of Jules Benjamin. Friends sometimes "swap" or exchange names.

The Carib of Dominica retains the Indian's traditional dislike of the indiscriminate use of his name. In ordinary forms of address he almost always uses "compère," "commère" (the old "gossip"), "cousin," "chef," "babe," "boy," etc. He habitually refers to people by a nickname (Popote, Fanfan) or by abbreviating the real name (Ma' Ham for Madame Hamilton). When traveling or staying in some other part of the island or abroad, he invariably changes his name, adopting for the time what Roth calls a "nom de voyage." The reason for this, as explained to me by a Carib friend, is that "nobody can do you anything (piaï, charm) when they do not know your right name." This idea that the name is part and parcel of the thing or person to whom it belongs, and the adoption of a false denomer, in order to trick the nefarious genii, is, I believe, peculiarly Indian. Thus, before going to the provision grounds or to the woods for food, a mother of the old school will tell her children that she is going to "fouiller fourmis" (dig for ants), fearing that she would be unlucky and return empty-handed should she pronounce the real name, and say (for example) that she was going to look for wawa (wild yam: *Rajana cordata* L.).

Forms of greeting are seldom used by the Caribs. Even after a long absence, a man will arrive with a simple "I am come," and take leave, before a long separation, with no more than "I am going."

Women and children eat in the kitchen apart from the men and after the latter have finished. I understand that this habit is peculiar, in Dominica, to the Caribs; though it would seem to be more a matter of convenience than custom in a community where the women do all their own housework. Vestiges of taboo seem to subsist with regard to the eating of certain foods. One old woman gave as the reason for not eating a species of sea crab, called àgaya, that the latter sometimes "had to do with women." She averred that this crab, were it to meet a girl or woman on the beach, would crawl up and urinate on her leg, thus rendering her pregnant for him. We read that the Caribs of other days would not eat hen, turtle, or eel for fear of thereby acquiring the unworthy characteristics of these beasts. There are Caribs in Dominica today who, for similar reasons, will not touch the meat of shark, conger eel, or an elsewhere widely consumed variety of fish, locally known as "vive."

On the other hand, Caribs consider the white man's custom of manuring land as disgusting, and would never knowingly eat food so grown. The finding of dung in a provision ground is sufficient reason for abandoning a part or the whole of the cultivation. A serious dispute arose, while I was in the Reserve, because one family accused members of another family of leaving excrement on their land. Perhaps this is one more reason why the Caribs' gardens are so far from their dwellings.

There does not seem to be any hard and fast rule with regard to the division of labor between the sexes, except such as physical fitness dictates. Hunting, fishing, sawing, land clearing, canoe and house building are obviously men's occupations, here as elsewhere. Work on the provision ground is fairly evenly shared. Twine and cords, torches, shark oil, Carib panniers, manioc sifters, and "couleuvres" are made by men usually, though not exclusively. Vegetable oil (palma Christi, known here as "carapat"), open, radial kitchen and garden baskets (corbeilles), the cleaning and (until recently) spinning of cotton, the preparation of farine and cassava bread—except for the grating of the manioc, at which the men often help—and all other household duties are women's work. Although a Carib be returning straight to his house after a fishing expedition, he expects his women folk to meet him on the shore and to carry the fish home. When compelled to carry a load himself, the Carib man always puts it on his shoulder or back, whereas the women have adopted the Creole negro custom of bearing burdens on the head.

River bathing is a daily habit with all Caribs, but once a month the Carib man takes a special kind of bath in the privacy of his own home with water in which certain herbs have soaked. The names of three so used are: the sensitive plant (*Mimosa pudica*), sou marqué (*Cassia bicapsularis*), and kudjuruk (or kugururk—unidentified). The bath must be taken on the night when the moon is new or "good" (that is, for planting), and its object is that of a spiritual antiseptic, said to counteract and defeat the evil effects of possible sorcery or piaï directed against the bather during the preceding moon.

A few simple remedies used by the Caribs of Dominica today are, in the case of—

Local inflammation: Half of an ember-baked green papaya applied hot as a poultice.

Internal contusion: The gum of the lowland red gommier (*Bursera gummifera*) as a plaster.

Wounds and cuts: The pounded heart of the kanu tree(?), together with salt. Shark oil and pimento leaves are also used, as is the fat of the Tête-Chien boa.

Flux, or intestinal chill: An infusion of the bark or roots of the wild white guava.

Colic: An infusion of the seeds or leaves of the bay tree (Carib, àchuru: *Pimenta acris*).

Debility in women: A concoction made from the tuber called Carib (or red) chalotte (*Cipura* sp.?).

Lack of appetite: Water in which has soaked Cimaruba chips (wild quassia, *Simarouba amara*).

These are straightforward houshold simples. Others partake more of the nature of charms. Of the latter, the best known are: "Surette de montagne," a sweet-smelling vine found only in the depths of the high-woods, and "l'envers caraïbe" (*Maranta indica* sp.?), a rare species of small-leaved native arrowroot (not the ordinary white or red maranta) with reddish leaf stems and tubers that go straight down and are said to intertwine or "plait" themselves. Native tobacco and a stupefying variety of ivy, or caapi, are known, but are not, as far as I could learn, now used. Earth or clay is eaten by some, but the practice is regarded as a vice by the community. On the other hand, many vouch for the good effects of one's own or another's urine, drunk warm, as a cure for poisoning or stomach ache (an emetic?); while others chew the gum of the gommier (*Dacryodes hexandra* and *Icica heptaphylla*) in order to improve their wind." An aphrodisiac, known as "poudre pine tortue" (powdered turtle's penis) is made and sold in the island.

"A Carib does not dream for nothing," I was told. He believes his dreams announce or portend grave events affecting himself, his family, or his friends. It certainly is amazing how often such omens prove correct.

All serious sickness and death itself are looked upon, not as the result of disease or age, but as the works of extra-natural agencies known as piaï. Thus, little confidence is placed in ordinary medical means of restoring health. The Caribs do not fear death, but are terrified at the idea of the hospital, and especially of being separated from their home environment in their last moments.

A piaï, to become effective, must be instituted by three persons—usually two men and a woman. The actual harm in any piaï is wrought by spirits who have, so to speak, no personal grievance, but, bullet-like, are merely unleashed and set onto a given person when he or she unwittingly touches some object—such as a stick or branch placed across the path—harmless in itself, but magically dealt with by the piaïmen in order to make it the agency for releasing the piaï. So one may, by good luck or cunning, escape a piaï intended for oneself, or fall, by ill chance, under a piaï intended for somebody else.

"They are taking life tonight," said an old Carib friend of mine the night he died of what I took to be a pleurisy brought on by the enforced wearing of wet clothes. I have often wondered whether he referred to the persons he believed to have bewitched him or to the death spirits themselves. Three years later (two weeks ago as I write now)

his widow assured me that it was useless for me to try to save their 10-year-old daughter, as the child had fallen under the same spell as the father, and had been sick ever since the latter's death. The girl was well grown, but very thin, and had swellings on neck and shoulders. She said her whole body hurt her. At the time I last saw her alive she kept vomiting a light colorless froth, and had a very quick pulse and normal temperature. At her own request I procured eggs and milk for her, and sent for the doctor on my own responsibility. But the message was either distorted or misunderstood, for the doctor neither sent any word nor put in an appearance; and when, 5 days later, the girl died, she was buried without a certificate, as is customary in the reserve. If, as is probable, it was a case of tubercular meningitis, an immediate operation might have saved the child's life.

Death is announced as soon as it takes place by a single protracted blast of the conque shell (corne lambi). Law and hygiene demand that burial take place within 24 hours (though Labat records having seen the body of a Carib dead several months and perfectly preserved through the use of roucou, *Bixa orellana*), but this is preceded, whenever possible, by a wake to which all and sundry come to make pigs of themselves on the rum provided. When the last "grog" is drunk and the coffin—made on the spot by some of the men present—nailed down, a procession is formed to conduct the corpse to the little cemetery of Sainte Marie, the last home of the last Antilleans. The reading of a French prayer by some old woman more literate than the rest, the tolling of a cracked bell, and the coffin is bestowed in a hastily dug grave almost within reach of the Atlantic waves. Burial in the foetal posture under the floor of the karbé was suppressed by the priests some 70 years ago. The depth of the grave as dug today is supposed to be equal to the length of the body.

Eight days after the burial a sort of second wake is held in the house where the deceased died. In the event of this not having been his or her usual abode, two wakes, or "prières," as they are called, are held. The deathbed is decorated with white flowers, candles, and objects having belonged to the dead man or woman. Until midnight women and girls sit around a table and sing French cantiques, while men and boys wander about, chatting and drinking. Fires are then lighted outside the house and cocoa and cassava bread prepared and offered to those present. At this time the girls usually pair off with the boys and disappear into the bushes, while the older men and women sit round the fire drinking rum and telling tales and conundrums. Sometimes a sort of ronde, or Reigen, is danced around the fire before the dispersal at daybreak. The meaning and object of this ceremony seems to be a kind of spiritual fumigation to rid the house of the now nefarious spirit of the new dead, which continues to lurk there after burial, as perhaps also of the evil powers that caused the death.

The belief in the "uncanny" quality of the newly dead as well as of the newborn and yet unnamed child is very widespread. Whatever its origin, the local priests condemn this ceremony; and several have assured me that there is nothing in the Christian religion to justify it.

Until recent years a type of wrestling was much practiced by the Dominica Caribs whenever they were drunk or quarrelsome. I have never witnessed it personally, but from the accounts of all those who have, it seems to have been more in the nature of a sporting contest than of an aggressive attack.

Childhood: Games and Pastimes

Fred Ober wrote of the Carib children of Dominica in 1877 that they should be the happiest on earth because of their freedom to play and wander naked among rocks and river pools. Perhaps. But children the world over are usually happy as long as they are well, and rarely appreciate relative advantages or disadvantages. The street urchin of our own lands takes the "slings and arrows of outrageous fortune" as much for granted as does the pampered darling of wealthy parents his movies, candy, and other luxuries.

One may still find Carib youngsters clothed as nature made them running around and about their homes. This does not mean that they never wear clothes, but merely that dressing is to them what dressing up is to our children. The school has come to Salybia since Ober's time, and although few of the present generation of young Caribs have learned anything of value to them there, they have come to regard the everyday use of clothes and shoes together with the talking of broken English as marks of especial superiority. Can we blame them? The Negro policemen who have established themselves in the reserve despite Carib protest, the Negro storekeeper in Marigot where they run errands for their parents, their own Negro schoolmaster—they all do these things, and who shall deny that such august personages are their Carib elders' superiors in authority, wealth, and knowledge of the world?

Undemonstrative as they are, the Caribs show a great deal of affection for their children, and an almost equal reluctance to discipline or punish them. In consequence, the children do pretty much as they please, and neither eat, sleep, nor bathe at regular hours; but get their whack of coffee, rum, or whatever else is going. Like other young people brought up in the tropics, they seem apathetic when compared with those of northern climes, and will often sit quiet and idle in a corner for hours rather than bestir themselves to go out and play. Even their games are usually of a sedentary order. In "pick-up," a game common to several parts of the world, the players squat opposite

one another and try to pick up from a heap before them a given number of nut shells in time to catch another they have just thrown in the air. Story telling and the asking of conundrums are among their favorite pastimes—as indeed they are those of their elders when these have leisure, as at a wake or during a "prière." Some of the stories are hashed-up versions of our own fairy lore and legend, while others have a more local flavor. Here is one of the latter:

A little girl wanted to visit her Nène-nène (marraine, godmother), who lived on the other side of a deep, wide river. When she reached its banks, she met a woman whom she asked to carry her across. The woman—who was no other than Maman d' l'Eau herself (Water-Mama, protectress of all fish)—said she would do so willingly were it not for fear of being betrayed. The little girl promised secrecy and was borne to the other side. When she arrived at her godmother's house everybody wanted to know who had helped her to cross the river. At first she refused to tell, but on being pressed, finally gave the secret away. Just before she set out for home her godmother gave her three seeds, one of gombo (or ochra), one of pois (pea, perhaps the pois doux shade tree, *Inga laurina*), and one of lavandre (*Renealmea caribbaea*, not our lavender), telling her to drop one each time she heard the Fou-fou (sp. humming bird, smaller than that known as colibri) sing. When the girl had gone a little way, Fou-fou came flying over her head and sang:

"Cassa-linon bi-bi, cassa-linon bi;
O-bi-a, qui trahit Maman d' l'Eau.
O-bi-a, qui trahit Maman d' l'Eau."

(N. B.—In Carib, cassa means porpoise, bibi is the word of address for mother.)

Thereupon the girl dropped the lavandre seed, which immediately grew into a big bush whose blossom Fou-fou stopped to suck. Later, when the bird had caught up with her and repeated its song, she dropped the gombo seed, and the same thing happened again. By the time she got to the river she had dropped all three seeds, but the humming bird was still far behind, busy with the flowers of the pois tree. Maman d' l'Eau asked if she had been betrayed. The little girl said no, and was carried across as before. She had reached the other bank safely, and was well on her way home, when Fou-fou arrived at the river, singing his song, and alighted on Maman d' l'Eau's outstretched hand. Maman d' l'Eau was so enraged with her spy—for such the humming bird was—for his delay, that she seized and tore him in four pieces.

Here, perhaps, is the explanation of a phrase I have heard used by one or two children, when they did not wish to go unaccompanied on some errand: "Fou-fou ké fai' moin perd'—the Fou-fou will lead me astray." Again:

A young man, Lé, falls in love with a beautiful girl, Lidha, who unfortunately is "moumou," that is, deaf and dumb. Nevertheless he marries her. One day he goes to the woods to hunt. He kills many birds, but instead of bringing them home, he covers his body with their rotting carcasses. Malfini, the mansfénix or West Indian hawk, flies to Lidha's hut and sings:

"Lidha, Lidha, Lé mourut en bois,
La-çi-vo-ka."

Lidha perceives that something is wrong, and follows Malfini, who leads her to the woods and repeats his song. On reaching the place where Lé is lying, Malfini repeats the song a third time, and Lidha recovers her hearing and speech.

Or:

A newly married man notices that his wife habitually gets up and leaves the hut as soon as she supposes him to be asleep. He follows her secretly to the river, where, after singing the following incantation,

"Yantibu, my dear, my dear,
Yantibu;
Ma-sa-zing po-lian-pang—ça malheureux:
Sababap, sabap,"

she turns into a crabier (sp. egret) and flies away.

The next day he challenges his wife to a singing contest, and, when she declares she knows no more, repeats the above lines himself, whereupon the woman turns back into a crabier, flies onto the roof, and is shot by the husband.

(N. B.—Yan in the first line and lian in the third line would seem to be parts of the Carib verb, n-iĕ etc., I do, or say. Tibu is the pronominal suffix for thee.)

Another story, of which I have never been able to get a complete version, tells of a man who used to go to the house of a "zombie" (spirit) and sing:

Touk-téka touk, ankou-bab,
Mo-koùkoua, mo-koùkoua, li teng teng

in order to make the spirits come out and dance. It appears he came to a bad end, poor fellow. Whether the words have a meaning or not I cannot say. Some say "mo-kék'ra" instead of "mo-koukoua."

The conundrums, common to most of the islands, are innumerable, and of the following order:

(What is it that) has no roots when it has leaves, and no leaves when it has roots?—(Answer) A sailing vessel.

A child that beats its mother?—(Answer) A pestle.

Water standing upright?—(Answer) Sugarcane.

Before asking a conundrum one must challenge with the words "Tim-tim," whereupon the challenged answers "bras chesse (bras sec)." Similarly, before starting out to tell a tale, it is usual to preface the words "Cric crac."

In the water game called "Maman d' l'Eau," after the Fish-Mamma—a personage, by the way, whose reputed presence in certain pools at certain seasons still commands the very real respect of the grown-ups—the child who is "it" asks the others in turn whether they eat flesh or fish. Those who say flesh may go free, while the more daring spirits who reply "fish" must be caught, ducked, and devoured.

Tops and stilts are known and made on the reserve from local materials.

The black wax of the native wild stingless bee (miel sur) is used by children and others for modeling grotesque human and animal figures.

Out of six left-over strands of larouman, many children make a kind of fingerstall, which contracts and holds fast the finger unwarily in-

serted (fig. 12). It is known as an "attrappe-la-main," or "wife leader."

They also make two toy figures from strands of split coconut palm. One, accordeonlike and sometimes several feet long, they call a "musique" (fig. 13) (Roth found these among the Guiana Indian children, who call it a rattle); the other, known as "soufflette" (or whistle) strangely resembles in miniature the large trumpets of spirally rolled manjagua bark from the Rio Uaupes, described by Roth.

FIGURE 12.—"Attrappe-la-main" or "wife leader."

Perhaps one reason why the Carib child does not "waste" energy in play is that he or she is expected at an early age to exert himself or herself to help the parents with their tasks: Carrying up water from the river, running errands, and so on. Later they work in the provision grounds, catch crayfish, and cut or carry louarouman from the woods for basket making—and all this in conjunction with supposedly daily attendance at school. I have seen girls of 12 sent off with a nine-hand bunch of bananas (70 pounds or more) on their heads, carry it without any rest over 10 miles of rough hilly road, and return some hours later with a heavy basket load of provisions. Nor is this to be regarded as the result of unkindness: the parents impose much harder tasks upon themselves, and are ignorant of the requirements of immaturity. What wonder, then, if such premature labor, often coupled with an insufficiency of sleep and nourishment, result in a small-statured race who mature late (the average age for puberty in girls is 15) and grow old early? The Carib children of Dominica undoubtedly owe such health and strength as they possess to a sound stock, to their daily baths in the river pools, and to the sun's rays that constantly embrace their little bodies; but I very much doubt whether their lot, today at any rate, is as enviable as Ober supposed it to be.

FIGURE 13.—"Musique."

SHELTERS, HUTS, AND HOUSES

Temporary shelters, known generally as ajoupas or, among the Carib, as karbé, are often built in the woods or elsewhere where there

is work to be done. Two, three, or more young saplings are cut and their ends stuck in the ground, or simply bent over to form what may be called the rafters. These are joined at their free ends by one or more tie beams and attached to two uprights sunk in the ground. The whole is covered with the leaves of the ailes mouche (*Carludovica plumieri*) or, where available, of yanga (?).

Until recent times the usual but now rare dwelling of the Dominica Caribs is known as the muinan (French spelling), the koubouya of the

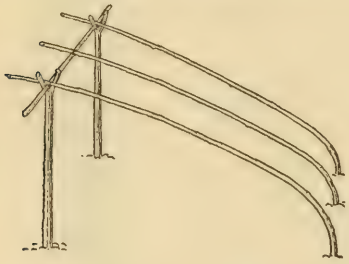


FIGURE 14.—Scaffolding for karbé before covering.

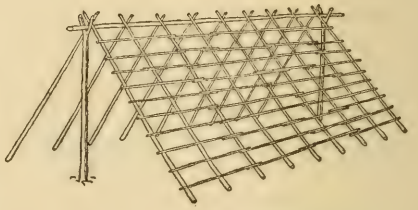


FIGURE 15.—Muinan before thatching.

Roucouyenne Indians. This is a simple structure consisting of a ridge pole supported by a main post at either end (fig. 14). The rafters, crossed by rods (gaulettes) to which the thatch is tied, reach to the ground. The whole is covered with cane straw, vetiveria, or, more rarely, with the leaf of the yattaghu palm [1] (*Syagrus* sp.). The lianas, called mibi and calabouli, are used to tie the thatch to the thatching rods, which are made of wood or bamboo. An interesting thing about these muinans (fig. 15), of which several are still in use as dwellings, is that they were commonly built double, one within the other, after the style of a Carib pannier, in order better to withstand storms.

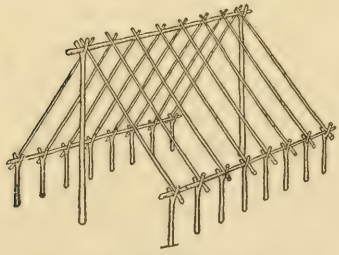


FIGURE 16.—Structure for kitchen.

Most kitchens in the reserve (in the West Indies the kitchen is always in an outhouse, even in the homes of the whites), though curiously enough few dwellings, take the form of an improved muinan, raised on posts and runner beams several feet from the ground, the sides boarded in, and the roof covered with coconut or yattaghu palm thatch (fig. 16). This type of house appears to correspond to the taboui of Cayenne.

The most common type of dwelling house today—though only in the last 15 to 20 years has it become so—is the regularly built hut, raised some 2 to 4 feet from the ground on piles, with flooring and

[1] The palm called "yattaghu" or "yattahou" has a leaf similar to the glou-glou, no spines, and corresponds to Duss, *Syagrus* in every respect except that the nuts are only half the size he mentions.

walls of hardwood boards and roof of shingles (preferably from caconier: *Ormosia dasycarpa*, or bois lézard: *Vitex divaricata*). This type of hut is found, with variations, all through the islands, and does not appear to be of native origin. The wood is usually cut and hewn into shape by the future owner, the foundations dug with the help of friends, the house raised (or mounted) with the assistance of a professional carpenter (who may take 25 or 30 shillings for his work), and the roof covered in 1 day at an almost ceremonious gathering of by no means abstemious helpers and friends.

The following are among the commoner woods employed by the Caribs in house building:

STAKES AND PILES.—Mangle rouge (*Rhizophora mangle* L.) and mangle blanc, acouquoi (*Bucida bucera* L.).

BOARDS.—Bois bander (*Chiona glabra*), bois rivière (*Chimarris cymosa*), bois sept ans (*Meliosma* sp.), noyer (*Zanthoxylum tragodes*).

POSTS.—Balata (*Mimusops* sp.), carapite ("black-heart," possibly *Amanoa caribbaea* (?), not to be confused with carapate).

RAFTERS.—Angelin (*Andira inermis*), caconier (*Ormosia dasycarpa*).

LATHS.—Bois rivière (*Chimarris cymosa*).

BEAMS.—Bois lézard (*Vitex divaricata*), laurier caca (*Guettarda parvifolia*), laurier rose (a sweet-smelling wood of reddish hue, large tree. Not the so-called rose laurel of other islands).

BASKETRY

Together with the building of dugout canoes, basketry now constitutes the Caribs' main industry and source of revenue. Apart from those destined for sale, they make other articles for domestic use of a superior quality, and which seldom are seen outside the reserve.

The materials used today, and the manner of their preparation, are as follows:

(1) Larouman or, more correctly, l'uarumâ (*Ischnosiphon arouma*), the itirite of the Guiana Indians. A slender, palmlike reed with long spatulate leaves, attaining from 12 to 15 feet in height. Cut and tied in bundles of 70 to 100 stems and brought down to the coast, where it is spread out on the beach to dry in the sun for several days. Without this process, during which it acquires an agreeable red russet color, the stems would soon become brittle and unworkable. Some of them are subsequently steeped for a couple more days in "mudholes" by the riverbank, where they take on a fine shiny black. The blackened stems are, however, less strong than those not so treated. Before use, each stem is split in four or six strands which are then drawn between a knife blade and the finger until the pith is removed and they have been made fine enough for the work in view. If white strands are wanted, as for the linings of Carib panniers, they may be obtained by scraping the outer surface of red strands, or merely by laying these inner side uppermost.

(2) Roseau (*Gynerium saccharoides*), a sugarcanelike reed found near water. The midrib of the leaf is peeled, bleached by laying it in the dew, and dried in the sun. While inferior to larouman in strength, it is of a purer white, and is therefore used in small decorative baskets and for plaiting hats. Its cane, employed for edging Carib panniers, is merely peeled and scraped.

(3) Racines-palmiste, the aerial, reddish colored roots of the mountain palmiste (*Euterpe montana*, *Areca regia*). Used especially for making shoulder carry-alls. Cut, peeled, and scraped, then split into two or three strands according to their size and to the worker's requirements.

(4) Mibi (*Stigmatophyllum puberum*), liane-pomme (*Merecuja* sp.), liane grise, calabouli, and corde caco are the local names of varying and differently used lianas. The first requires only to be scraped, after which it may be dyed yellow or mauve—in the first instance by steeping it in the expressed juice of a small-bush carrotlike fruit, locally called saffron; in the second case, by soaking it in an infusion of the leaves of a small or medium sized tree known as "tan" (?)—not *Byrsonima spicata*, which is also known as "tan." Liane-pomme (the water lemon of the English Creoles) is only peeled before use, while the others require no preparation.

(5) Latanier (*Thrinax* sp.). The septa of the mature leaves are split in two and worked before becoming too dry.

(6) Bamboo. Dried indoors and split into fine strands.

(7) Balizier (*Heliconia bihai* and *H. caribbaea*). The midrib is sun-dried and parallel lengths tied with twine to form simple roll-up mats.

(8) Bakua (*Pandanus* sp.). As (5).

(9) Vétiver (*Vetiveria odorata*). The leaf is bleached by boiling, dried in the sun, and split in two for plaiting into hats, etc.

(1) Carib panniers (pagàra) are made in wicker ("Armadillo") pattern, multiple weft, and in duplicate. The inner lining, or "mama," is all white, while the outer covering, or "skin," is usually worked in two or more colors (fig. 17). Between these two component parts a layer of sun-dried cachibou (*Maranta cachibou*) or balizier leaves is arranged carefully to render the basket watertight. The orthodox style consists of a receptacle and a cover (both in duplicate), the latter having two-thirds the depth and a foundation of four strands more than the former, over which it fits tightly. Made in all sizes and shapes, the commonest average, without the cover, is about 30 by 24 inches by 18 inches deep. Some are as large as an old-fashioned trunk, while others, of miniature dimensions, are made in "niches" of 9 or 12 baskets that fit into one another after the manner of a Chinese puzzle. A game-basketlike variety of identical construction, but whose width is about one-third its height and a quarter its length (so

as to admit being slung by a cord from the shoulder), is known as "portemanteau." "Valise" is the name given to a still more flattened type (fig. 18).

There are only two or three Caribs left in Dominica who claim to know how to make baskets of the so-called tressed variety, and those examples of the latter I so far have seen must be classed as of freak

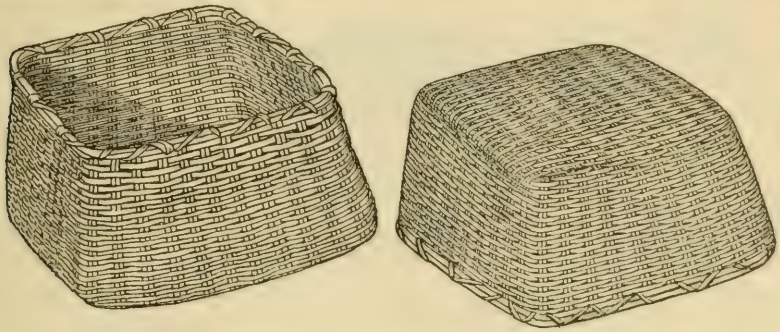


FIGURE 17.—Carib pannier and cover.

rather than orthodox pattern. Probably as the market for the better work grew worse—the average price for the ordinary Armadillo pagàra has fallen in 10 years from a dollar to a shilling—the older men ceased to interest themselves in these ornamental wefts and the young men never learned them.

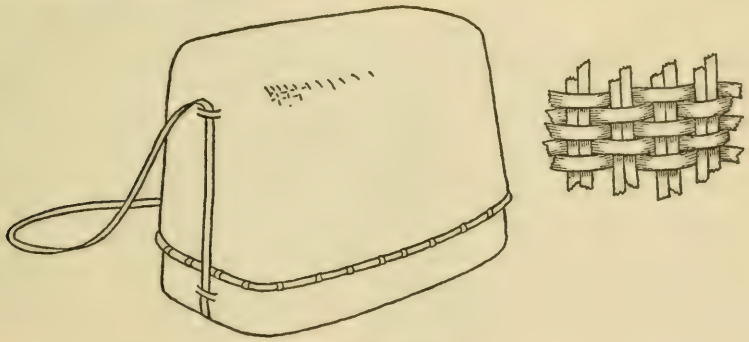


FIGURE 18.—Valise.

Other utensils manufactured from larouman strands are:

(*a*) The "panier cocaille," used for storing eggs, etc., in shape somewhat resembling an openwork basket with hexagonal base (fig. 19). Made in open hexagonal weave with horizontal cross-weave. About 1 foot to 18 inches across.

(*b*) The "hébichet," or cassava sifter, made in the alternate one-over-and-under-two pattern, either round or, less commonly, rectangular (fig. 20). The projecting strands are bound onto a double-hoop edging made from two superimposed lengths of a stout liana known

locally as corde caco (*Heteropteris platyptera*). The rectangular variety are of closer weave and somewhat resemble trays.

(*c*) Cassava squeezer (fig. 21) (matapi or couleuvre, so called) has gone out of general use and become extremely rare in the last 20 years through neglect or inability on the part of the younger generation in their manufacture. The domestic article measures 4½ to 5 feet in length and about 4 inches across the mouth when not in use; its making entails the use of a great deal of larouman, of time, and of care. The local method seems to have been that described by Roth with regard to the Guiana productions, except that here the final strands seem to have been bound around a liana or bamboo ring sometimes instead of being woven into the more usual stirrup-like contrivance for taking the lever. I have endeavored to reintroduce their manufacture and general use, especially with regard to the smaller models, which might form an article of sale to tourists.

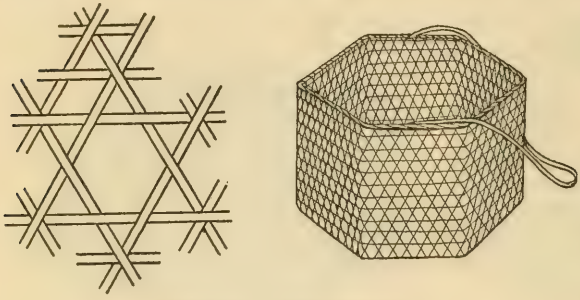


FIGURE 19.—"Panier cocaille."

(*d*) Matùtu, or Carib tables. These have quite disappeared today, though some old men remember having seen them in their youth. From such descriptions as the latter could give me, they would seem to have resembled the rectangular hébichets, with short sticks, about 18 inches in height, set into the four corners. From all verbal accounts they were made of larouman, and not, as some authors state, from latanier (*Thrinax* sp.).

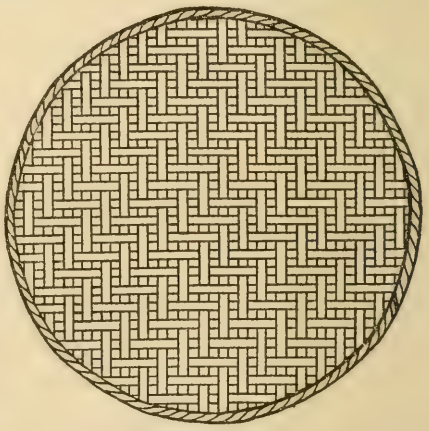


FIGURE 20.—Cassava sifter.

(*e*) Finger traps, or "wife leaders", as they are sometimes called, are also made of larouman, but have been described already in the section entitled "Childhood: Games and Pastimes."

(2) Roseau is often used, mixed with larouman, in Carib panniers destined for sale. It is of a purer white than the latter and more easily worked. The cane itself invariably forms the bordering or edging of the panniers. In recent years hats have been woven by the

women from this material. Fans resembling those of the Guiana Indians are woven in Dominica today, though curiously, not by the Caribs themselves, from a mixture of roseau and larouman strands (fig. 22).

(3) Racines-palmistes, the reddish and, in the big tree, aerial roots

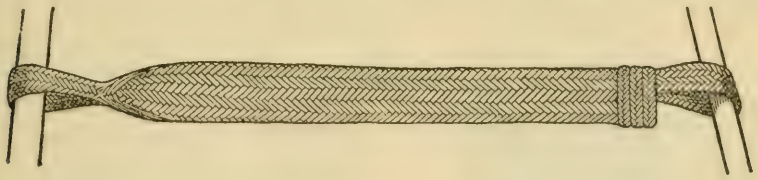


FIGURE 21.—Cassava squeezer.

of the mountain palmiste (*Areca* sp., *Euterpe montana*), provide exceedingly stout strands which might serve a number of purposes, but are used almost exclusively for the manufacture of shoulder baskets (patois has "djolà" and "conten", more rarely the Carib "catoli"; Roth calls them knapsacks) (fig. 23). They are made here in both close and openwork weave, the former being more common, and of the alternate, one-strand-over-and-under-two-others (which latter are in pairs) pattern. The openwork mesh is of the diagonal type, with interpolated horizontal weft.

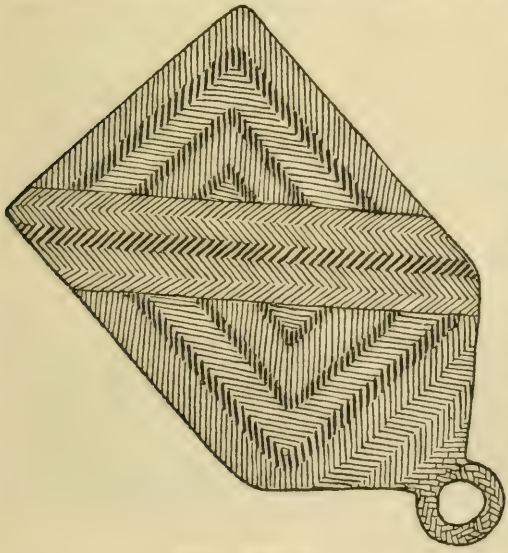


FIGURE 22.—Fan.

(4) These lianas are used, as is bamboo, in making round and oval-based baskets with simple radiate warp and over-and-under-one weft. Since they have a handle hooped over the top, these are known generally as "paniers à l'anse." The warp strands cross at their centers in superimposed groups of four or six, and into these the weft is woven spirally—at first over and under each successive pair, then over and under each successive strand. Market baskets are made from mibi, while the stouter lianas are used in those made for carrying produce from the provision grounds. It seems likely, as Roth suggests with regard to similar baskets in Guiana, that this type is of African and not native origin.

(5) Latanier (*Thrinax* sp.), a fan-shaped palm which seems to have been used in the past, according to old authors, much more than at the present time, having then served in the manufacture of tables, squeezers, and even baskets. Perhaps the palm has become scarcer, or it may be that the authors were mistaken. Within the reserve its use is confined today to broom making, and to plaiting and sewing its septae into a sort of game basket (fig. 24) they call "djokom". The people in another part of the island (Penville), where there used to be many and still are a few Caribs, also make of latanier a kind of sack which they use for pressing their manioc.

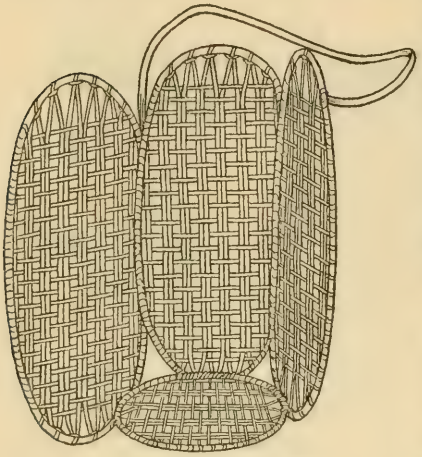


FIGURE 23.—Shoulder basket.

(6) Bamboo is used as well as for the round baskets mentioned in (4) for making sambwa, a kind of round basket with narrowed mouth, used for carrying fish caught off the rocks. It is also employed as an alternate to cotton thread in making kali, a local variety of fish pot or landing net used for catching flying fish (fig. 25). The sambwa is, except for its shape, of similar construction to the round radial-type baskets and has a cord handle. The kali

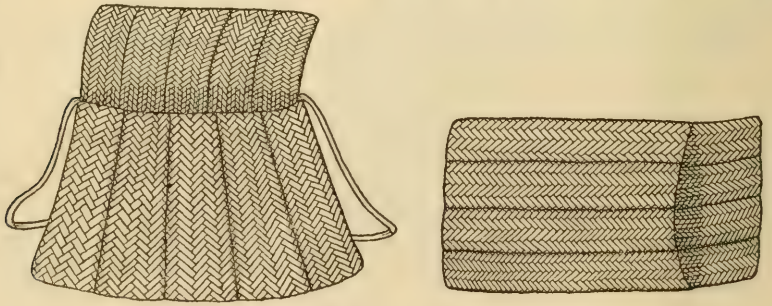


FIGURE 24.—Game basket.

have a bamboo frame and handle and an open hexagonal mesh (similar to that of the panier cocaille) of cotton thread or bamboo.

(7) Simple roll-up mats (fig. 26), on which children or others may sleep, are made from the balizier leaf, dried and bound together horizontally to the required length by Bromelia twine.

(8) Bakwa (*Pandanus* sp.) and (9) vétiver (*Vetiveria odorata*), imported, one from the Pacific, the other from the East Indies, and used here for plaiting hats (an industry of obviously foreign origin) and occasionally for covering huts and shelters.

Thread, Twine, Cords, and Ropes

Cotton.—Two varieties, probably indigenous and known respectively from the colors of their leaf stems as "black" and "white" cotton, are to be found close to most of the houses, and attain, since they are always left to themselves, the size of orange or apple trees. Used today only for calking canoes and for stuffing pillows and mattresses, cotton was spun by the Caribs within the memory of most of those now living on the reserve. The native method was shown to me by an old woman. A band of teased cotton wound around the left wrist is spun onto a long stick or spindle by rolling the latter on the right knee. The upper end of the spindle (fuseau) is crooked. A round disk of calabash, through whose center the stick is passed, acts as base for the growing spool of thread.

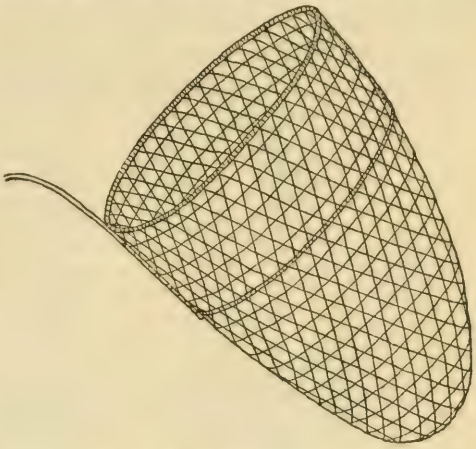


Figure 25.—Fish pot or landing net.

La pitte (kuruwa, karata, silk grass, *Bromelia* sp.).—The leaf—longer than that of the pineapple, and without thorns—is drawn through a noose of maho or other cord attached to a projecting limb. An even pull with both hands on a short round stick over which the leaf is folded disengages the fiber and leaves the green pithy matter in the noose. The "drawn" fiber is next bleached and dried in the sun, and twine spun from it by rolling it on the naked thigh with the flattened palm of the hand (fig. 27)—a downward stroke spinning simultaneously in the required thickness two or as many single ply as are wanted, followed by an upward stroke which unites them in one thread or twine. Any length can be spun thus by the addition of more fiber when the end of one lot is reached. Twine made from la pitte is strong and lasts well in water. When used for fishing line it is strengthened and stiffened by the addition of a little gum from the gommier tree. Thread made for binding the borders of Carib baskets is rubbed with manni to render it more durable. La pitte may be made into multiple-ply cords and bands for carrying loads, tying baskets, etc.

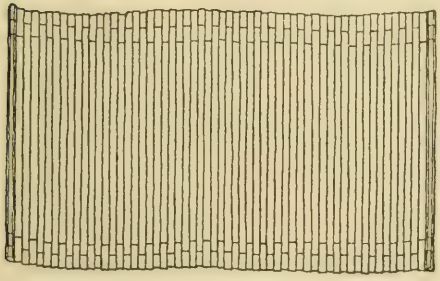


Figure 26.—Roll-up mat.

It would, and doubtless has in the past, serve to weave excellent hammocks.

Langue-boeuf, a species of wild agava (*Agave americana*), is also used in the manufacture of thread and twine. In this case the separation of the fiber necessitates a preliminary soaking or rotting process, as in the case of hemp. Once disengaged, the fiber is submitted to the same processes as *Bromelia*.

Maho (or mahaut) is the name given to a number of trees of different species, whose only common characteristic is the use to which their bark may be put in making ropes and cords. They are: Maho noir (or bois violon, *Guatteria* sp.), maho piment (*Daphnopsis caribbaea*), maho cochon, maho doux, maho figue. Some, such as bois violon, are indigenous, while others, such as the bananalike maho figue, are imported. Strips of the bark from these trees are shredded and twisted—some rudely, to make halters and ropes, others being tressed carefully into as fine a twine as that of *Bromelia* or *Agave*.

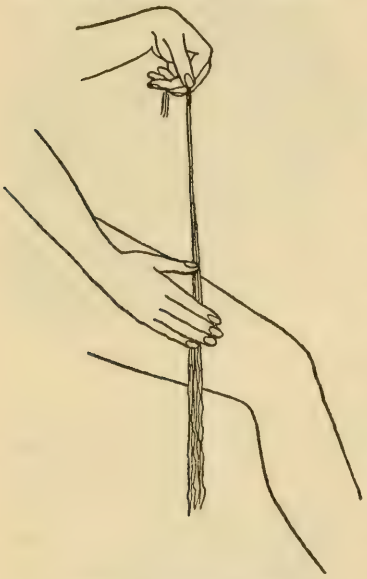


FIGURE 27.—Spinning fiber twine.

Besides the above-mentioned raw materials, all of which require more or less preparation and manufacture, the woods abound in all manner of natural cords and lianas, some as thick as a man's arm, some as fine as cotton yarn. These are put to a number of uses, some, such as mibi (*Stigmatophyllum puberum*), being used for tying palm-leaf or cane-straw thatchings of muinan and karbé, as well as in basketry; while others, such as caapi (species of native ivy), are employed in the catching of crayfish (see below).

FIRE AND LIGHT, GUMS, WAX, RESIN, OILS, AND PIGMENTS

The so-called fire drill (fig. 28), with which fire was obtained by revolving a long pointed stick between the palms of the hands, after the manner of a swizzle stick or "lélé," in a groove made in another and softer piece of wood, is remembered, but no longer used.

The Carib tinder box (fig. 29), locally called "briquet" or "coucou du feu" (the coyembouc mentioned by Father Labat as having been used in his day for storing trinkets, etc.), is made from a species of calabash known as "callebasse-boite." Two halves, which may be decorated or plain, are fitted together after the manner of an Easter egg, and contain a "fire stone" of red, white, or black jasper, an old

iron file, and a piece of dry rotten wood to catch the spark. The specimen I have has a diameter of 6.5 cm and a total length of 12 cm. These are still in general use, especially among those who go hunting or canoe making in the high woods.

The dried root of the tree fern is used to preserve fire and to carry it from place to place. Spongey and peat-like, this wood will burn for hours without smoke or flame, generating great heat and leaving hardly any ash. Hence the Caribs give it the name "watu hâkuiyâ—voracious fire."

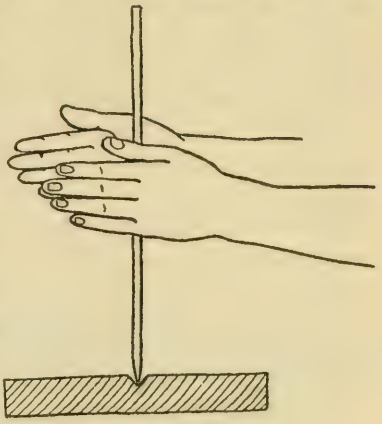


FIGURE 28.—Fire drill.

Torches (flambeaux) of two kinds are still made and used. Gum—usually from the white gommier (*Dacryodes hexandra*), of which practically all the dugout canoes are made—is collected after scraping the bark at the base of the trunk. It is then molded, candlelike, around a central wick made from the pounded wood of the tree fern, of bois diable (*Licania hypleuca*), or of icaque (*Hirtella triandra*). The whole is wrapped in the shroud or outer covering of the unopened palmiste heart, or in that of the yattaghu (?) palm, and bound up with *Bromelia* twine. (The palmiste of the islands is the manicol (*Euterpe* sp.) palm.)

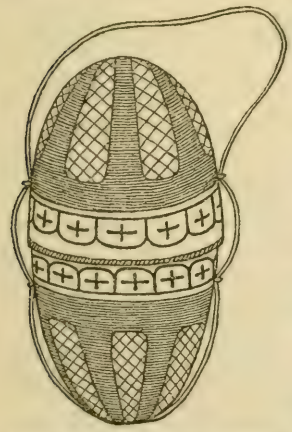


FIGURE 29.—Tinder box, engraved and colored with roucou.

Another kind of torch is made from the so-called bois chandelle (*Amyris* sp.). The wood is merely split lengthwise and bound up in bundles or faisceaux. The gum of the *Icica heptaphylla* (gommier l'encens) is also used for torches, while the gum of the courbaril (*Hymenea courbari*) might well be but is not so used. The size of the torches is largely a matter of taste, the average being about 4 feet long and the thickness of a man's leg. A good gum torch will burn continuously for some 10 to 12 hours, while a candlewood torch lasts only about 2 hours. Both give off a good deal of smoke, which has, however, a pleasant, highly fragrant smell. The candlewood gives, perhaps, the clearer flame.

The gum of the red lowland gommier (*Bursera gummifera*) is more liquid than the preceding and is used only as a plaster applied to cure contusions.

Beeswax is used principally for making into candles and is of two distinct varieties. The common European honey bee, presumably

once imported but now found in a wild state, makes a typical comb (locally called "cassava") whose wax, at first yellow, becomes quite white on boiling and straining. Left to itself, it soon becomes hard. On the other hand, the native stingless bee (sometimes called "pou lélé"), small and dark of color, makes a sort of pouch about a foot long, interiorly divided into pockets, in lieu of comb. The wax is brown-black and remains perfectly malleable, however long it is kept. For this reason it is often used for molding figurines, etc. The honey itself is liquid, very slightly viscous, of a clear brown hue, and has a fragrant subacid taste (miel sûr).

Two kinds of oil are commonly made and used in the reserve today. Carapate oil, so-called, is nothing more than the oil of the palma Christi, castor oil, one or two of which shrubs grow near every house. The berries are gathered when ripe and stored until required in baskets or calabashes in the kitchen. When oil is wanted they are roasted, pounded in a mortar, and the resulting paste boiled, whereupon the oil rises to the surface and is skimmed off. The women make this oil and use it for anointing their hair. The *Carapa guianensis*, from which oil used to be made, still grows in the woods of Dominica, but is used today only for its wood.

Shark oil, made by the men, is used in cruses for interior lighting. Boiled together with copal gum and mixed with dry plaintain straw, it serves in the calking of canoes.

Turtle oil is known to have been made and used for cooking, but owing to the present rarity of this animal and the laws made for its preservation is seldom met with today.

Coconut oil is occasionally made for sale but is never put to any domestic use in Carib households.

Manni (*Moronobea coccinea*?) is the name given to a blackish resinous substance used by the Caribs for strengthening the *Bromelia* twine with which they bind their baskets. I have seen lumps of it as big as a man's fist in the homes of basket makers. It is interesting to note that the tree from which this resin comes is not found in Dominica, nor, as far as I know, in the neighboring islands. The Caribs seek and gather their supply on the beach, where the ocean currents deposit it at certain times of the year, chiefly in February and March.

Pigments are singularly ignored nowadays. Roucou (*Bixa orellana*) still grows near many of the houses, but as the wearing of clothes has become general since the introduction of Christianity, its use as a skin protection against sun and insects has been forgotten. It is at present used occasionally as a decorative coloring matter in the home, but the present-day Caribs do not know of any fixative medium. Formerly it was used, mixed with oil of carapa, as a body paint, and the bright red pigment obtained by rubbing between the palms of the hands the ripe seeds contained in a half-opened pod.

The leaves of a tree known as bois tan (not *Byrsonima spicata*, also called bois tan) give, when macerated in water, a mauve dye used for coloring the strands of a liana called mibi, for basket making.

Saffron is the local name of a shrub, the expressed juice of whose carrotlike fruit constitutes a yellow dye similarly employed.

Kwachi and Bois Cassave are the local names for two trees, the juice of whose fruits provides a black stain or ink, used sometimes on thread or cloth.

Though not properly coming under the heading of pigments, a kind of mud found at certain points along the river banks may be mentioned

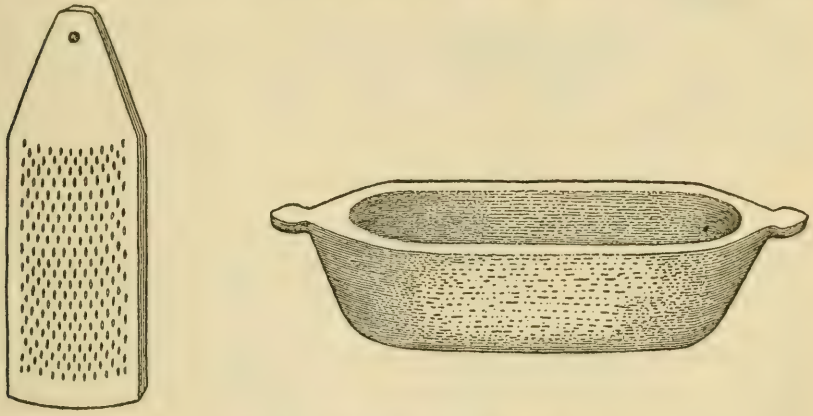


FIGURE 30.—Cassava grater and cassava canoe.

here, as it is used for staining the stems of the larouman, to which it imparts a very fine black. The stems are merely buried in the mud, and left there for 2 or 3 days.

OTHER DOMESTIC REQUISITES AND THEIR USES

The Caribs' domestic utensils, apart from those which come under the heading of basketry, consist of the following: Cassava grater, cassava canoe, platine, palette, pestle and mortar, boucan or barbecue, cane press, terrine, bouri and couï (kinds of calabash), lélé or swizzle stick. As many of these articles (all, with the exception of the platine) are home-made, and serve principally in the preparation of cassava, it will be as well to start by describing that process.

The tubers of the manioc (*Manihot utilissima*), of which there are several varieties (see section on cultivation), are first scraped to remove the outer skin and then washed. Next they are grated on the "grage" or cassava grater into the "counou" or cassava canoe (fig. 30). The former is a board, some 3 feet long by 1 broad, into which sharp flints or nails have been driven. The latter is made from the wood of the gommier tree in the same manner and in almost the same shape as the real dugouts, except that the "counou" is neither

opened out nor bordered as is the "canot." At either end a small handle is carved to facilitate manipulation. The cassava canoe is usually about 5 to 6 feet long by about 2 feet high and 18 inches across. When a sufficient quantity of manioc has been grated, the pulp is pressed, in order to remove the poisonous juice, by one of three methods: (*a*) by applying weight or leverage to a matapi (see under basketry) filled with the wet grated manioc; (*b*) by squeezing through leverage a sack made for this purpose from latanier (*Thrinax* sp.) and filled with the grated manioc pulp; (*c*) by wringing out the moisture in a cloth. Thus dried, the grated, squeezed manioc is next passed through the hébichet, or sifter (q. v. under basketry), in order to remove lumps and to render it of an equal fineness. Meanwhile the manioc water, or juice wrung from the grated manioc, has had time to settle in the calabashes in which it was collected. The residue or starch, known here as "moussache," is removed, dried, and either mixed with the meal or set aside for separate use.

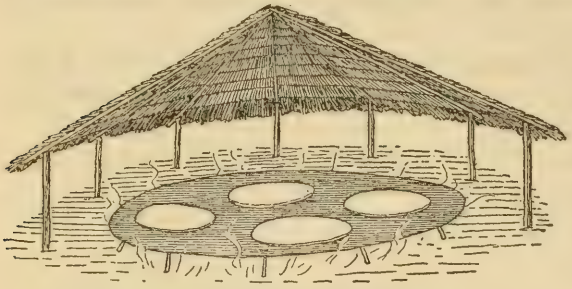


FIGURE 31.—Platine with cassava bread baking under shelter.

The dry sifted meal is now ready to be baked on the platine (fig. 31). This, in the old days a slab of stone or earthenware, is today a round sheet of iron, 6 to 10 feet in diameter, heated from beneath, and housed in a special circular shelter of thatch known as the "caïe-platine." On it the meal is baked either into cassavas or into farine. The former is a round flat pancake about three-quarters of an inch thick and 2 feet in diameter. While baking, the meal is patted into shape, flattened, and turned with the help of a miniature paddle (fig. 32), some 2 to 3 feet long, known as a palette. Farine (manioc flour) is likewise baked on the platine, but instead of its being pressed and shaped it is constantly stirred during the process. These two products (together with tannia, yams, edoes, plantain, etc.) constitute the staple food of the Dominica Caribs today.

FIGURE 32.—Cassava palette.

Toumalin (the tamali of the Mexicans?) is still made by the older Caribs in the reserve. It is a brown pungent sauce with peculiar flavor and the consistency of thick gravy, made by the prolonged boiling of the manioc water from which the starch has been removed,

and to which pimentos, onions, fish, or ciriques (land crabs sp.) have been added. This sauce is used to moisten and season the otherwise insipid cassava bread. The noxious character of the manioc juice disappears in the boiling.

The unbaked manioc meal is sometimes sweetened with sugarcane juice, spiced, and then wrapped in plantain leaves, tied into little packages, and boiled to form a sort of dumpling known as "canqui."

Fond of liquor as the Caribs undoubtedly are, they no longer make any native drink (unless it be illicit rum), nor have they done so, it seems, for a considerable time. There are those, however, who remember an old man who used to make a beverage from the glou-glou palm and from that known to the Caribs as yattahou (*Acrocomia sclerocarpa*, and *Syagrus amaro* (?) respectively), but they were unable to tell me how it was made.

Pestle and mortar are indispensable utensils in any Carib home. With them are ground coffee, cocoa, castor-oil nuts, and everything else that has to be reduced to powder or paste. The former is club-shaped and about 3½ feet long, the latter being in the form of a jar some 2½ feet in height and 10 inches across the mouth. Both are made of any hard heavy wood such as white cedar or "tan" (*Byrsonima* sp.).

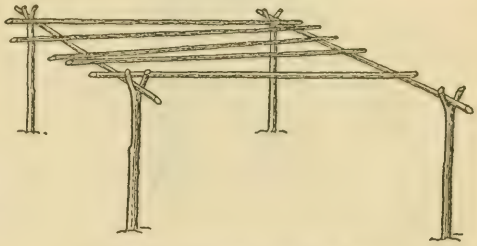


FIGURE 33.—Boucan or Carib barbecue.

Inside or outside of every Carib kitchen stands one or several boucan (fig. 33) (whence "buccaneer"), ready for smoke drying an excess of fish or game, which, thus preserved, will keep anywhere from a month to a year. Sticks of guépois (*Myrcia leptoclada* D. G.) or of bois d'Inde (*Pimenta acris* Sw.) are most often used for this purpose, and are stuck in the ground so as to form an erection some 2½ feet high resembling two football goals about 4 feet apart, across which other sticks are laid to form a grid.

A primitive type of cane press, also common to Guiana, is to be found outside nearly all the houses in the reserve (fig. 34). It consists of a thick post stuck in the ground. A cavity is hollowed out near the top, and a hole pierced, through which a lever passes. The cane, placed transversely across the mouth of the cavity, is crushed by the lever being brought down on successive sections, thus expressing the juice, which runs down grooves into a waiting receptacle. "Vesou" (sugarcane juice) is a cheap and ever-ready sweetening matter for coffee, cocoa, etc.

Despite its name, the terrine is a wooden bowl (rather like the modern salad bowls), which was and sometimes still is used for wash-

ing or sweetening food, or even as an eating and drinking bowl. Rare.

The canari, of earthenware, and no longer made locally, is the name given to the "fait-tout" or "buck pot" of the Creoles. Other pots and pans, plates, and dishes, grow on trees in the calabash (*Crescentia cujete*, various species). They are of all shapes and sizes, but may be classed in three main groups according to the use for which they are destined. The largest, with a hole pierced in the top, is used for carrying water. Others, cut in half, are used for pans and dishes, or for drinking cups (couïs), according to size. Still others are made into containers of varying shapes, and sometimes decorated.

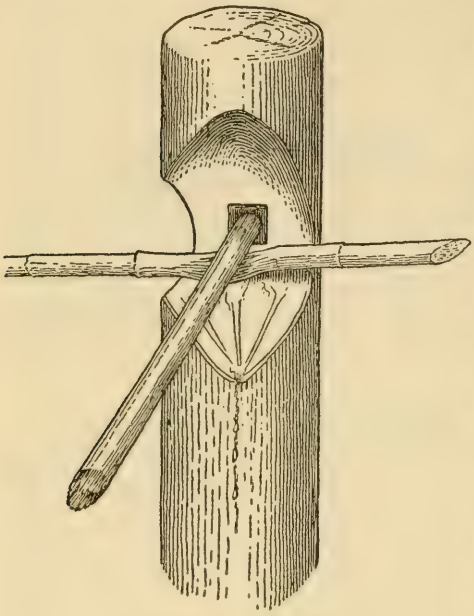


FIGURE 34.—Cane press.

The lélé is a long, thin, natural swizzle stick, cut from the branch of a small tree (*Ximenia americana*?) at the junction of a number of twigs. The wood is of light yellow color and has a spicy, curry-like smell. Contrary to popular opinion, the bâtón lélé or swizzle stick is used mainly in the West Indies, not for making punches (the native takes his rum straight), but for preparing chocolate, calalou (a sort of gumbo soup) and other dishes of local repute.

CANOES

Probably the most typical product of the Island Carib is, and always has been, the dugout canoe. The word itself—as the French "canot," which term designates, in local patois, the dugout—is derived through Spanish from the Carib "kanaua," which was their name for the large variety of dugout or war canoe. The Carib name for the smaller craft seems to have been, in the men's language, "ukuni," in the women's, "kuriàla," whence our word, corial. The Spanish called the smaller craft "piragua," whence French and English "pirogue," a term now applied to big, barge-like, open vessels and to large canoes used for coastwise transport of cargo. That there is or has been confusion of terms is obvious; Father Labat

refers to the smaller boat as pirogue, and tells us that the Caribs called the larger one "bacassa." He says:

> The pirogue measured 29 feet in length by 4 feet 6 inches in breadth in its middle. Both ends were pointed and higher than the middle by about 15 to 20 inches. It was divided by nine benches, behind each of which—at about 8 inches distant from and higher than the seat—was a stick the size of an arm, whose ends stuck into the sides of the pirogue, and which served to support and keep open the sides of the craft as also for the paddlers to lean against.

He goes on to say:

> The bacassa was 42 feet long and almost 7 feet wide in the middle. The forward end was raised and pointed in a similar manner to the pirogue, but its after end was flat and shaped like a poop. It had benches like the pirogue. Both craft were built of red cedar (*Cedrela odorata*). The sides of the bacassa had been raised about 15 inches by the addition of boards of the same wood, split with an axe and not sawn. Neither boat had a rudder, steering was accomplished with the aid of a paddle a good third bigger than those serving to row or, as they say in the islands, "swim" the boat. The Caribs' pirogues have usually two masts and two square sails, the bacassa, three masts.

This extract—obviously an accurate and painstaking description of the Carib craft of his day—is interesting for the sake of comparison. The dugout canoes made by the Caribs of Dominica today, though of a general resemblance, differ in several respects from those just mentioned. To begin with, they usually are much smaller (especially when we consider that the Parisian foot was almost an inch longer than ours). Those made today range from 16 to 30 feet in length, but one of 21 feet is considered a good-sized canoe. The proportions remain sensibly the same. Then again, Labat does not speak of the smaller vessel's sides being raised by boards, which they now invariably are. Red cedar, or acajou (*Cedrela odorata*), though still fairly common in the woods, is no longer used for canoe building, its place being taken by the gommier tree (*Dacryodes hexandra*). Nevertheless, much remains that is unchanged and traditional in the making and shaping of the Carib canoes.

Having found a suitable tree—that is to say, one of sufficient symmetry, proportions, and perfection—the Carib proceeds to fell it unaided, an operation which usually takes him from dawn until sunset. If in a hurry for the boat, he will build himself a karbé on the spot, and subsist on whatever wild foods the forest may provide until the canoe is ready for hauling. More often, however, he will leave the felled tree for days, and return home to attend to other matters. In the latter case he takes the precaution of felling his tree only at the new moon; for were he to do so at any other time grubs would soon take possession and the wood become spoiled by borers. The tree is next shaped and dug out or, to use the patois term, "fouillé," first with an ax, then with a hand adze. Supposing our Carib stays on the job all and every day, it will now take him anything from 4 days to 2 weeks—depending on the size of the canoe and

the diligence of its maker—until he is ready for "hauling." This takes 10 to 12 men, and is usually paid for—like all work the Caribs do to help one another—by a liberal provision of rum. Cords of maho or of natural liana are attached to the canoe through eyelets pierced in its prow, and the boat literally hauled, to the rhythm of chanties reserved for these occasions, through dense bush and by rough forest tracks, up and over an incredibly steep ridge and down to the home of the new craft's master, where it is installed in the shade of some nearby tree to be finished and bordered.

Although the heaviest of the work is now done, the canoe is as yet only half made. Work goes on with the hand adze until the sides are of the requisite even thickness and the prow properly shaped and smoothed. Supposing the canoe to have a total length of 24 feet, its greatest width in the middle, at this stage, will not be more than 18 or 20 inches. Before it can be serviceable the canoe must be opened. This is done by half filling the interior with stones and water, and leaving them thus until the wood has begun to warp. Fires are then lit on either side and a few feet distant. The canoe opens up under the influence of the heat like a flower in the sun. While this process is going on, a number of cross sticks, known as "totes" (Carib, "totaka," to support) are introduced to aid the process and keep the sides open. When a width of 3 feet to 3 feet 6 inches has been attained amidships (the two ends having been previously tied securely to prevent splitting) the fires are extinguished. Five or six knees, or "courbes," of white cedar or other pliable wood are now hewn and bent into shape and fixed in place at intervals across the bottom of the boat in order to strengthen it. The canoe is now ready to have its sides raised by the addition of two boards or planks of the same wood as the boat, i. e., gommier. These are hewn in such a way (not sawn) as to compensate for the loss of depth amidships due to the opening up; and have a width varying from about 9 inches at the forward end by 15 or more in the middle to about 8 inches aft. Thin strips of wood, known as "taquets," are fixed between the knees; but whereas the latter reach only to the mouth of the dugout proper, the former come up to join the gunwale, which encircles the upper edge of the raised sides, or bordage. The number of seats, of permanent cross beams, or totes, will depend on the size of the canoe and the use for which it is destined. In Labat's day manpower—for speed and strength in warfare—was the most important factor; today, convenience for fishing or for carrying loads is the first consideration. Two benches and three totes (two of the latter being pierced to take masts) would be usual in a canoe of the size (24 feet) we are considering. As Father Labat goes on to say, the Caribs' canoes have, as a rule, two masts (bois côte, *Tapura guianensis*, or bois violon, *Guatteria* sp., being the best woods for this pur-

pose), and two square lugsails, traversed diagonally by yards. The local names for various parts of the boat and rigging are given in the diagram (fig. 35). Curious is the forward part of the finished canoe: the prow, called noeud (knot), forming a separate piece shaped out of white cedar (*Tacoma leucoxylon*), and the stem, or pince, with its forward cant. The noeud is fitted into the front of the canoe proper, with which it forms an angle, and to it are attached the sides and gunwale. The canoe is calked along the jointure of the sideboards (and if and where there are any defects) with cotton lint or plantain straw soaked in a mixture of shark oil and powdered gum boiled together.

As will readily be seen from the above, such a canoe is, at the very least, 3 weeks in the making. Besides a good deal of labor, it has cost

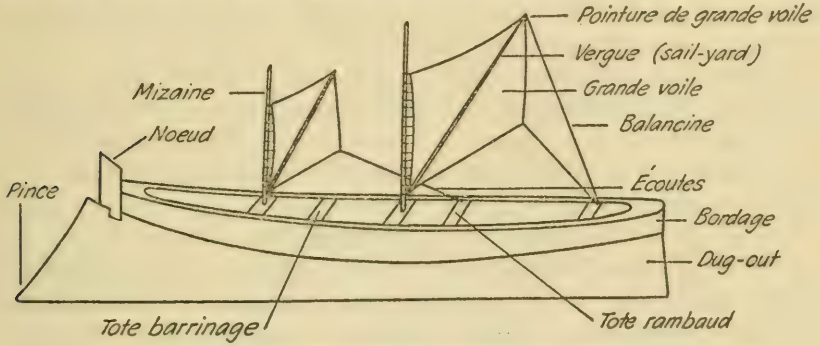


FIGURE 35.—Carib canoe with raised sides, masts, and sails.

its owner the price of the rum for the hauling. It is all the more significant of the Carib's character that he will often, when pressed for cash, sell his craft for as little as $3.

Although the Caribs have, to some extent, adopted our oars—just as we sometimes use paddles—the latter are still common for steering and, under certain circumstances, for propelling their dugouts. It is undeniable that the decreased necessity for speed and strength in the shape of manpower has diminished the importance of paddles and, consequently, the skill employed in their making. The best woods known and used in Dominica for this purpose are bois caïmïte (*Chrysophyllum glabrum*) and quina (*Exostemma caribbaeum*). The size and shape of the modern paddles is much the same as those of the old days (about 5 feet long, of which the blade occupies a quarter to a third), but there is no ornamentation in the shape of grooves or lines of any sort at the present time.

FISHING

Having forgotten the use of bows and arrows, it is natural that river and sea food should form the most important food adjunct of the present-day Caribs in Dominica. Owing to the roughness of the

ocean on the windward side of the island, and to the Caribs' primitive methods of capture, fish are rarely caught in sufficient quantities for commercial sale, but when plentiful—as during the flying-fish season—the fish are dried on the boucan or barbecue, and, thus preserved, are stored for periods of greater scarcity.

The localities where fishing is carried out may be divided as follows: river, on or off the rocks, inshore, offshore, or in the canal. Nets are neither made nor used in the reserve, line (home-made of *Bromelia karatas*) and hook (purchased) fishing from dugout Carib canoes being by far the commonest technique used today. Fishermen usually go out in groups of three. Except for all-night fishing in the canal (between the islands) or rod fishing off the rocks (also at night), they go out soon after sunrise, to return around 4 in the afternoon. The owner (and usually maker) of the canoe also provides the tackle, and for his service is assured of an extra lot of fish; so that if he is not himself a fisherman, as is often the case, the day's catch is shared equally among the actual fisherman plus the owner; it being understood that should the owner fish himself, he receives two shares for their one. When more fish is caught than is actually needed the extra is more often given away than sold.

Fish caught in the open canal are: flying fish, tunny, dorado, king fish, shark, "vareu," and "mè." Except for flying fish, which are caught above water in a specially made receptacle called kali (see under Basketry), these are all caught with hook and line—the larger specimens with the help of a harpoon or a spear (vare).

Inshore, but still with hook and line from a dugout: pirame, couvally (carangue), "vivanneau," "vieille," "bourse," "oreilles noires" (species of red snapper), "vive"; and, with a casting net or "épervier" of fine mesh weighted at the corners and drawn through an ox's horn, "sardines," "pisquet," "cailles."

From the rocks, with rod and line and usually at night: "tanche," "cirusien," "cibouli," "valioua," "lipi."

Lobsters are caught by diving. Turtles are seldom sought, but must be taken with a special pot known as "fol."

The rocks themselves offer a source of food in the shape of sea eggs or urchins (patois, chadrons), octopus (chatou), various sea crabs, "chaloupes" (Carib: màburi) and "bugaus"—two species of shellfish. A sort of seaweed similar to the "carrageen moss" of the west of Ireland is occasionally gathered and eaten and is likewise reputed to be good for lung trouble.

At certain times of the year a delicious and diminutive fry of clear gray color, known as "titiri," is taken in sheets at the river mouths. They are thought to be the young of the fish locally called coulirou and balaou, which, though very common to leeward, are not taken by the Caribs, as their capture requires the use of nets.

The most common river fish are popularly known as mullet, pike, "flathead" (tétard, Carib: makúba), "cocos," "loches." To these must be added two varieties of fresh-water crayfish (Carib: wàçu, and smaller, içulu), prawns ("bouques"), and shrimps (chevrettes). A kind of river periwinkle, called vignot, is also eaten. Methods of capture vary a good deal: flatheads, prawns, shrimps, and sometimes small crayfish are "felt for" under rocks and banks; cocos are caught with hook and prawn for bait, or with the épervier at the river mouth. A special and rather curious method of catching crayfish is sometimes practiced: a length of caapi (species of ivy) is passed through a bit of raw manioc which is then hung in the water, the other end of the caapi being attached to a rock or stone on the bank. Returning some hours later, usually after dark, the fisherman finds a quantity of stupefied crayfish collected around the manioc, whose poisonous juice has rendered them incapable of flight. Loche, pike, and mullet may be caught with hook and worm, or in a special trap known as bachoua, now becoming extremely rare. A more usual method, however, is by poisoning the river.

Two fish poisons are known and used commonly by the Caribs of Dominica today: the leaves of the shrub *Phyllanthus conami* (usually called "énivrage") and the applelike fruit of a small to medium sized tree called bàbarra or bambarra (*Diospyros* sp., *Piscidia erythrina* L.). The latter is more powerful, but may be used only in fresh water, whereas the leaves of the conami are sometimes employed to poison small creeks and pools along the seashore. Each member of the party (women for the most part) arrives at the river with a load of conami leaves. These are then pounded and thrown in the river. As soon as the fish begin to jump out of the water to escape the effects of the poison the Caribs dive in and seize them. The bàbarra apples are also crushed, but are enclosed in a basket which is immersed only for the time being, as it would poison the water for almost a week were it left there.

A third variety of fish poison, used by some, is the bark of the tree known in Dominica as bois savonette (soap tree), bois cicérou, or bois pipiri. It is a large tree with small, diamond-shaped leaves which froth when rubbed in water, and bears a pod about 6 inches long containing three smooth red seeds the size of a pea. Possibly a species of *Lonchocarpus*. Not to be confused with the soap bush called Malvinia or Sang Dragon. All catalogs of West Indian flora are very confused and contradictory.

Cultivation

The Caribs' main food supply comes from individual family gardens or provision grounds, made by burning the forest (usually secondary growth) and sowing or planting in the ashes between the burned tree

stumps. Partly as a protection against the depredations of domestic animals (hens, pigs, goats, cows) and partly because, under primitive methods of culture, the ground becomes exhausted and a new garden must be made every 2 or 3 years, the provision grounds are for the most part situated beyond the coastal hill crest on the slopes of the Pegoua Valley, some miles distant from the homes of their owners. Practically the only implements of culture used today are the cutlass (machete) and the digging stick—a strong, sharp-pointed stick popularly known as "lochette" (Carib: koyéré).

Manioc (*Manihot utilissima*) still forms the principal crop, although its importance as a staple diet has diminished in the last half century. Several varieties are known and distinguished by the following local appellations: manioc noir (the commonest), m. blanc, m. violet, m. bleu, m. beurre, m. 100 livres, m. doux, camanioc. The last two are nonpoisonous and may be eaten as vegetables. Manioc is planted by cuttings—usually by groups of three to one pit—and takes from 1 year to 18 months to reach maturity. The process of farine and cassava making is described elsewhere.

Next to manioc, the most important tubers cultivated are: chou (*Xantosoma saggitifolium* Sch., malanga, tannia, taya) of various species, varieties of yam (*Dioscorea alata, pilosiuscula, multiflora, Cayennensis, trifida, tuberosa*—blanc and de l'eau, bâtard, marron, à piquants noirs, couch-couche, yam bonda, etc.), of sweet potato (red, yellow, white), of *Maranta* (red, white), *Solanum*, and *Cipura*. Squash and Indian corn are also grown, but do not form a staple food, as with the Indians of central and southern North America. The latter is never ground into flour, but is roasted and eaten whole, rather after the manner of a delicacy or sweetmeat. Bananas, plantains, and breadfruit (*Artocarpus*) of the ordinary and of the "chestnut" (*seminifera*) varieties are grown and eaten extensively. Various fruit trees and other utilitarian trees and bushes are cultivated around and near the houses. Such are: cotton,[1] coffee, cocoa, palma Christi or castor-oil plant, roucou (*Bixa orellana*), calabash (*Crescentia cujete*), guava, mango, sugarcane, papaya, various species of *anona* (*muricata, reticulata, squamosa*—corossol, cachiman, pomme canelle, etc.), and la pitte or silk grass (*Bromelia* sp.) for the making of twine and fishing lines, *Phyllanthus conami* or "nivrage" for fish poisoning, Malvinia or "soap bush," sapodilla, and pineapples (of which several small species grow wild in the woods).

The clearing of the land is done by the men, the rest of the work (planting, weeding, digging, and gathering) being divided among both sexes largely according to individual taste or family arrangement.

[1] Two varieties—so-called black and white, according to leaf-stem color. The former is esteemed better.

The High Woods

The Caribs' intelligence is in their hands and feet. I suspect their own word for incompetent, mabuku, to mean "without feet"; and, just as the typical Frenchman's ability is best described by that untranslatable word, "débrouillard," so the characteristic virtue of the Carib may be summed up in the word "mainoeuvre." The true Carib is neither a hard nor a quick worker, but he is always able to maneuver his way out of a difficult situation in order to accomplish what he is after. "Where there's a will, there's a way" is a motto which suits him well, and nowhere does he show this better than on the high sea and in the high woods.

The high woods (in patois: les grands bois) are those tracts of virgin forest that still cover much of the island's mountainous interior. They lie, as a rule, well over 500 feet above sea level, and it is in them that the gigantic gommiers, chataigniers (*Sloanea*), cedars, rosewood, and other forest kings reach their full majesty. Here the Caribs come to saw wood for posts, boards, and shingles; to fell and hew the gommier for their canoes; to cut larouman for their basketry; to hunt the agouti, the wild pig, the wood pigeon, and the parrot; to search for wawa (*Rajania cordata* L.), berries, and wild honey; to fish the streams with bait, trap, and poison for mullet, crayfish, and other varieties.

The young shoot or cabbage of the mountain palmiste (*Euterpe montana*) provides a pleasant and wholesome salad. It is true the tree must be felled in order to obtain this, but, when this is done at full moon, the bole becomes the refuge of a species of beetle, the *Calandra palmarum*, whose fat white grub constitutes a culinary delicacy much appreciated locally under the name of ver palmiste. This is the reverse of the process employed in cutting trees for dugouts. These are felled at the new moon in order to prevent the incursion of borer worms and grubs. Certain plants and trees, such as the male papaya, are cut down at certain phases of the moon in order to make them spring up again as female, that is, as fruit-bearing trees. Wild pineapples, sapodillas (*Anacardium occidentale*) are to be found in the woods, as also the fruits of the balate and balata trees (*Oxythece hahnianum* and *Mimusops riedleana*), of the bois cote (*Tapura guianensis*), courbaril (*Hymenaea courbaril*), and icacque (*Hirtella* sp.).

Wild honey of two sorts is to be found: that known as "sûr" (sour) from the small native stingless bee, or "pou lélé," which produces the black wax already mentioned, and the "gros miel" from the (probably imported) ordinary bee in a wild state. The Caribs are fond of eating the white grub or larvae (in patois: cousins) of both varieties—usually together with the honey, raw.

Water may be obtained on the heights from the corde de l'eau (*Pinzona*), a species of stout liana which releases, when cut, a pint or so of cool, refreshing sap.

Ciriques, a yellow-and-black species of land crab common in and around the reserve, make a very palatable dish. The green sperm of the male cirique is one of the ingredients of the typical Carib sauce, toumalin or tumali. They are usually caught at night with the aid of flambeaux. The Caribs sometimes obtain salt from the roasted and ground-up shells of these crustaceans by maceration and subsequent evaporation. Another and odd species of land crab, abounding in the woods and sometimes eaten by the Caribs, is the so-called soldier crab. When small, he finds and takes possession of a vignot, or river periwinkle's shell, exchanging this when he grows larger for that of a bugau (a snail-like sea shellfish), and that again, perhaps, for a lambi or conque shell. Scuttling along among the leaves, a seashell on their backs, their one claw sticking out behind and their two hairy horns in front, these "soldiers" present a truly comical appearance. Like the black crab of the leeward coast, the soldier is a great traveler, and at certain seasons battalions of them are to be seen on the march, going down to or up from the sea.

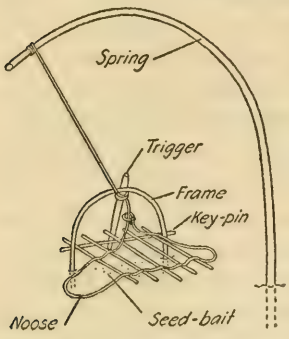


FIGURE 36.—Spring snare for game birds.

Iguana lizards are not uncommon in some parts of the woods. They have a delicate flesh whose taste resembles that of chicken. They are found on the branches of trees, hypnotized by whistling, and caught with a running noose tied to the end of a rod.

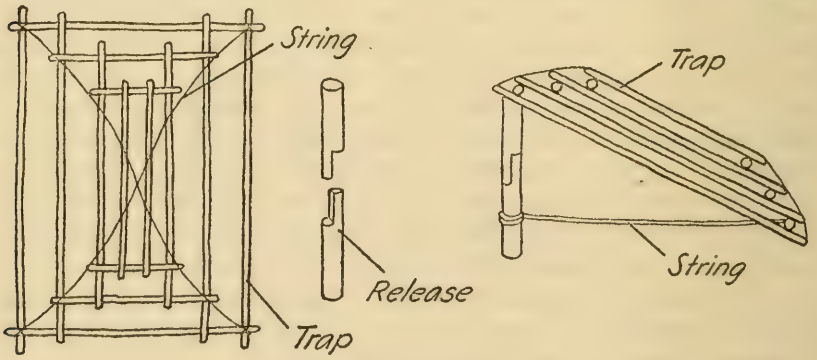


FIGURE 37.—Fall trap.

Two kinds of spring snares are made and used for catching birds: one for such small pilferers as sucriers, moissons, gros becs; another (fig. 36) for the succulent game birds known as perdrix or mountain dove, and tourterelle. A simple basketlike fall trap (fig. 37) is also used, as also birdlime, or rod and noose. The old Caribs are said to have caught

parrots alive by stupefying them in their roosts with the smoke of green peppers placed together with burning charcoal in a calabash raised on the end of a long bamboo rod.

Birds are sometimes enticed to the snares by an imitation of their call or by a live captive of their own species used as a decoy.

There is no particular interest attaching to the local methods of hunting wild pig, agouti, and manicou. The latter (the West Indian opossum) is often caught by hand; whereas the Caribs, without bows or guns, rely upon their dogs both to find and kill agouti and pig.

Legend and Tradition

The present-day Caribs have not the long memories of the Scottish Highlanders. Anything that happened a long time ago took place, for them, in the reign of one P'tit François. Little François seems to have been, in spite of his name, a very big chief. One would be inclined to regard him as an almost legendary figure were it not that, from all accounts, Jolly John, the present chief, is only his sixth successor. Here is the list:

1. P'tit François.
2. Wakanik (also called Popote).
3. Joseph (mentioned by Ober as alive in 1877).
4. Brunie (whose son, Fanfan, is now about 75).
5. Auguste.
6. Coriette.
7. Jolly John.

Joseph and his sister, Ma' Augustin, noted for having spoken little else but Carib, are said to have been the younger brother and sister of P'tit François. As both of them died within the memory of old people still living, P'tit François himself cannot possibly take us much farther back than the middle of the last century. Fanfan says he was "a big little boy" at the time of Joseph's death. Supposing Joseph and his predecessor, Wakanik, to have reigned 30 years between them (a generous allowance), this would place P'tit François' death at about 1845.

P'tit François is said to have been, among other things, a "manitise" (magnétiseur), which I understand to mean a sort of spiritualistic medium. Before holding communication with the spirits he would request his client to place a full unopened bottle of rum upon the table for the use of the ethereal visitors, whose thirsty "glou-glou-glou" might thereafter be heard distinctly and taken as a sure sign of their arrival and readiness to cooperate. Strange to relate, after the spirits' departure, the bottle was always found as full and intact as ever.

35729—38——11

When the people were troubled by the depredations of rats, P'tit François would invoke their king, and demand—it is said with success—that His Ratty Majesty keep his subjects in order.

A fragment of what I believe to be a very old legend was recounted to me by Fanfan as something that actually happened in the days of this wonderful chief.

At that time there lived in Salybia two brothers called Màruka and Cimanàri, famous for the charms they made. They would go up to the house of the Tête-Chien [1] to find the Master Tête-Chien—the same who, when the earth was soft, made the Stairway of the Tête-Chien at Cinéku.[2] He is big, big, big, has a crest of diamond on his head, and crows just like a cock. Well, when they found him, they would take powdered tobacco and burn it before him on the blade of a paddle. Then that tête-chien would vomit, and all that he vomited was red "l'envers caraïbe".[3] After that the snake would disappear gradually, and in his place came a young man "sans culotte" (naked). The young man said nothing about his being the Tête-Chien, but asked Màruka and Cimanàri what it was they wanted, and instructed them, when they had told him, how they must use the envers caraïbe to make their charms.

Màruka and Cimanàri did not die in Salybia. When they felt old age approaching they went away to the other country. When they reached the shores of the Orinoco River they plunged into the stream, and when they came out on the opposite bank they had become two young lads again, and on the water where they had been there floated two turtle shells.

They never came back to Dominica, and at last one of them died; but the other, as far as I know, is still living there.

Leaving the Stairway of the Tête-Chien, and going northward by way of the Maho, Gaulette, Salybia, and Crayfish Rivers almost to the present northern boundary of the Reserve, we come to the little hamlet of Bataka (or Baraïçi), nestling on the hillside 15 minutes hard climb above the "highway." Most of the full-blooded Caribs remaining are to be found here today. The people of Bataka are not very well liked by the other Caribs, among whom they have a name for treachery and for practicing "piaïs," even against one another.

On the extremity of a narrow ridge opposite and beyond Bataka is perched a huge rock, itself some 60 feet in height, that overlooks the valley of the Pegoua, the ocean, and the Reserve. It is composed of a blackish, crumbling rock, and on its summit and from its precipitous sides grow vines and plants, a stunted scrub, and a kind of wild orchid. It is known as La Roche Pegoua, and is the home of a benevolent spirit about whom many tales are told, one of which is related below.

[1] Tête-Chien: "dog-headed" Antillean constrictor, small boa attaining up to 12 feet in length and the thickness of a man's thigh. Carib: wa-na-çai.

[2] House of Tête-Chien; so-called. Rocky cliff in the heights of the Couanary River, said to be much frequented by these snakes. Legendary home of the giant snake of this and other legends, said to have had a precious stone (variously called carbuncle, diamond) of extraordinary brilliance on its head, and which it was capable of covering with a sort of movable membrane, or eyelid, thus creating at will light or darkness in the forest. The Stairway of the Tête-Chien, so-called, is a formation of soft gritty or rotten rock of reddish color and apparently volcanic origin, which emerges from the soil on the crest of the ridge called Cinéku, above the Akayu River, and proceeds in a series of "steps" down the side of the cliff to the sea, under which it continues and can be followed from a boat for quite a distance.

[3] L'envers caraïbe: a species of red maranta whose roots are said to "plait," and which is used only for charms. When planting, it is usual to place a piece of silver in the ground along with it. Has become rare.

The people of Bataka used to go up to the Pegoua Rock in search of charms. There are steps leading to the base of the rock, and, on its top, a crack that goes through to the inside. That is where the zombie lives, but if ever you see him it means some one is going to die soon. On the top of the rock there grow all manner of charms, but in particular you may sometimes find there a white flower (surette de montagne?) with so sweet a smell that people passing on the highway at the foot of the cliff may easily perceive it. When it is flowering a new blossom comes every hour of the day and every hour another fades and falls. If you are lucky enough to get one of these flowers you may command with it whom you will. You have only to rub it on the palm of your hand, then raise the hand in the direction of a person and speak his name. However far away he may be he will have to obey and come to you. If you go in quest of the flower it is wise to take a white cock, or at least some powdered tobacco, as a gift to the spirit of the rock.

There was one old woman of Bataka whose husband treated her badly and neglected her to run after other women. One day when he was gone fishing she made a lot, a big lot, of cassava bread; and, taking her children with her, went up to the Pegoua Rock, where she was lucky enough to get one of these flowers. With it she went down to the river to bathe, and when she had bathed she rubbed the flower all over her body and flung the remnants to the winds, saying: "Go join your master", which they did, disappearing in that same instant. After this, she and her children took the highway, and went quickly in the direction of Toulamon, now called Londonderry. Soon after they had passed the Cachibona River she heard her husband coming after her with the fish (presumably as a peace offering), but taking her children by the hand she ran and ran until they reached the old Caserne Caraïbe (literally, Carib Barracks, but perhaps a mistake for "caverne", a deep cave on the shore between the village of Wesley, or La Soie, and the Londonderry Estate, showing signs of human occupancy, or at least, frequentation). Here she knocked and was admitted just as her husband caught up and made a grab at her. Once safely inside, she shouted to him to go away, as she needed him no longer. There was nothing else for him to do; but as he turned to go he was changed into a bird with yellow beak and claws, called Pierrot Vanter, whose shrill persistent call you will often hear even today. The woman is still inside the cave, together with all the other old Caribs. They will not leave it until the end of the world, though it is said they sometimes come out at night to use their boat (an islet about a hundred yards off shore), for one night I passed there myself as I was going fishing, and when I returned the same way some 2 hours later it had disappeared.

I was told that for the last 20 years at least nobody had attempted to scale the rock, as the white cedar which had grown nearby and helped in the ascent had long since been felled by a windstorm. However, Carib ingenuity and agility overcame all difficulties. A slender sapling whose stem rose some 8 feet distant from the sides of the rock served as prop for a crooked stick, hewn and tied in place from materials growing on the spot, whose other end was made to rest on a narrow projecting ledge opposite and above. This precarious bridge once passed, the summit was reached by holding onto handfuls of plant and vine, or onto knobs of crumbling rock. Alas, I did not find the flower. It may be that it was the wrong season, but, in any case, I certainly should not have been so stupid as to forget that white cock.

Language and Vocabulary

The last Caribs in Dominica to speak the native Indian idiom as their mother tongue died some 20 to 25 years ago. But even 60 years ago, at the time of Ober's first visit, the language was employed only by a small minority of older men and women. The urge for economic contacts with the Creole-negro population surrounding them combined, in all probability, with the priests' disapproval of continued isolation of a flock whose conversion was henceforth secure, ended in the adoption of that lingua franca of the West Indies, Creole patois. Those Caribs who today remember some smattering of their fathers' and mothers' tongue regard such knowledge rather in the light of a joke.

Whether the proverbial distinction between the men's and the women's languages persisted to the end is hard to say, but it is certain that some of the words given below belong to the Carib, and others—the majority—to the Arawak stock of languages. Creole patois itself is rich in the debris of many tongues and it is to be hoped that some philologist will soon undertake its excavation.

The following vocabulary is neither exhaustive of living linguistic vestiges nor is the whole of it necessarily known to any one person now living in the Reserve. My chief informants were: Jimmy (Dordor) Benjamin of Bataka and his brother, Jean Noël (now dead), "Fanfan" and Ma' Bernard of St. Cyr, Lucien of Waïçima, Ma' Henri and her sister Ma' Janney of Bataka, and Choline and Chief Jolly John of Ste. Marie, Salybia. The latter furnished me with the song and some of the words, but was especially helpful in acting as my host, guide, and sponsor in the Reserve.

The words have been put down as they were given me—in their final form only after hearing them repeated many times by different people. Other vocabularies (in particular that of Father Raymond Breton, published 1665) have been consulted only as a check to word meaning and form. The spelling, as with all unwritten idioms, has been rather a problem. Breton wrote Carib like French, bu tat the best, and apart from the fact that French pronunciation has changed since his time, such a method is clumsy. I very much regret not having had a recording apparatus, but have done my best with the means at my disposal. In general, and taking the following modifications into account, the vowels have been given their Latin values, while the consonants are as in English. Stress is denoted by the apostrophe, as in supplemen'tary.

a, as in father; ao, as in how: âo, as in Portuguese "cão".
ë, as indefinite vowel sound in mother; becomes nasal when final.
â, as "an" in French; ä, as in cat.
e, as in wet; ê, as em (final) in Portuguese.
é, as in French, née.

i, as in machine; î, as in the Portuguese word "fim".
u, as in French "poule"; û, as "um" in Portuguese.
o, as in not in closed, as (Spanish) no in open syllables.
ô, as "on" in French.
au, eu, ae (but not ai, ay) are disyllabic. Ai, ay, as in fly.
ç, always soft, is intermediate between the s sound in seen and sheen, as in the name of the god Siva; ch as in machine.
hw, more strongly aspirated than English wh; n and r also aspirated when followed by h; whereas gh and kh are soft though distinct gutturals.
p, k, and t often become confused with b, g, and d, as do l with r, ç with ch, long o with u.
ph represents a more explosive sound than that of English f, with something like the trace of a p.
ui, ue, ua (except where there is a stress division, as in u'a) are the same sounds as wi, we, wa, and are pronounced as in wit, wet, wax, etc.

Alternative versions of the Carib are given in brackets.

Where the English equivalent for a Carib word is unknown its patois equivalent is given in parentheses.

(C) denotes a word still in local patois usage.
(M) denotes a word of the men's language.
(F). denotes a word of the women's language.

ya'wahu, ya'wa	=bush god or spirit.
ma'phuiya	=devil.
kariphu'në	=carib.
mé'keru	=negro.
ka'buru	=negro-indian mestizo (from Span. cabra?).
ankëli'tsi	=white (Englishman: from Span. Inglese).
hué'yu, (hui'yu)	=sun (M).
ka'çi	=sun (F).
nu'nû	=moon.
bi'(r?)umô	=star.
waruku'mô	=star.
wa'tu	=fire.
tu'nâ	=water.
hu'ya	=rain (F).
kuno'bu	=rain (M).
bara'na	=sea, ocean.
kara'bali	=breeze (the trade wind).
iwai'yu hurru'	=storm.

The so-called inseparable pronominal prefixes are, for the men's and for the women's languages respectively:

n-, and i- =my; w-, or k-=our.
b-(p), and a- =thy; hui- =your.
l- =his
t- =her; nh- =their. Thus:

nubu'ali	=my husband (lit. head, leader).
nia'ni	=my wife.
iba'mui (M)	=my (man speaking) sister's husband.
buku'çili (F)	=thy father.
buku'çuru (F)	=thy mother.
pi'bu ke'hê	=thy elder brother.
limeta'muru	=his father-in-law.

liment(s)i' =his mother-in-law.
numuiyâ', (nubuiyâ', (nulubuiyâ') (?) =my "combosse" (relationship of two people who have had connection with the same man or woman).
hyî'haru (F) =woman.
na'tari =sweetheart.
nha'phtaha' (?).
no'kobu =my body.
na'niçi (F) =my heart.
ba'ku =thy eyes.
niti'buri =my hair.
ni'çiri =my nose.
niu'ma =my mouth.
warikae =our ears.
turakae =her belly.
laka'bo (luka'bo) =his hand.
pu'guti =thy foot.
liçi'bu =his face.
nu'ruku =my genitalia (female).
bré'ke (bué'ke) =thy glans penis.
alu'kui =genitalia (male).
pe'te-roku' =thy anus.
way'ku (C) =loin cloth.
mué'nâ (mui'nâ) (C) =permanent shelter, the "koubouya" of (Cayenne).
akae =pot.
ku'muri (ku'mori) =calabash for carrying water (patois: bouri).
tu'ba =half calabash for cooking.
ba'té kuilé' =half calabash for drinking, etc. ("coui").
paga'ra =Carib toilet basket.
kataori =Carib shoulder carry-all.
te'le =Carib kitchen basket.
eçu'baraté' =knife, cutlass.
ibi'taru =fishing line.
u'kuni (M) =dugout canoe.
kuria'la (F) =dugout canoe.
matutu' =Carib table.
matapi' =cassava squeezer; "couleuvre."
mé'ruwa =kind of clay or soft rock: "tuff."
mam'ba =honey.
nu'ni =victuals.
nâ'iti =eating.
kâ'iti ="canqui": grated manioc, sweetened and boiled.
bam-bam =cassava bread.
ha'liyë =arrowroot.
baku'ku ="fig" banana.
bari'ru =banana.
kala'buli (C) =kind of liana used in thatching.
kwai, (kwaik) ="tannia", variety (*Colocasia esculenta*).
kawâ'i (F) =manioc, variety (*Manihot utilissima*).
ki'ere (M) =manioc, variety (*Manihot* sp.).
kapla'o (C) =var. yam (*Dioscorea* sp.).
kumô =var. of "tannia" or "chou caraïbe."
mâ'bi =red variety sweet potato (*batata* sp.).
pi'kâ =yam, variety (*Dioscorea* sp.).

wai'bukuré (wai'buruké) =water yam (*Dioscorea* sp.).
wawi'amô =squash.
yuri =tobacco.
yat'ta(gh)u (C) =kind of palm (*Syagrus amara*?).
yaya (C) =fine, hair-like prickles on cane, etc.
tawâ'i (C) =kind of tree (? see word for manioc).
hwéhwé =tree (generic).

The following, given to me as Carib, are obvious corruptions and show how Carib absorbed foreign words:

ça'utéru'=cauldron (French, chaudière).
pula'tu =dishes (French, plats).
bakaçu' =cow, ox (Spanish, vaca).
kabayu' =horse (Spanish, caballo).

On the other hand, many words of current Creole patois appear to be of native origin. Such are (French orthography) canari, cali, cabouya, counou, hébichet, manni, toumalin, djolà, djokome, samboi, bachoua (a fish pot of woven liana). The meanings of these terms are made clear in the other sections.

Before going on with the Carib names of fish, reptiles, birds, animals, etc., it may be as well to look at the all-too-few other parts of speech I have been able to collect as separate words. They consist of numerals, qualifying adjectives, and verbs, together with their derivatives:

a'bâ =one.
bia'ma =two.
é'rua =three.
biam'buri =four.[1]
çemehé'êti =good (as to senses) it is.
iropo'ôti =good (as to fitness) it is.
bii'meti =sweet, it is.
yetimeni =injury, hurt, pain.
yehë'meni =evil, badness.
hyâ'mohya-âli, (hyâ'muhya-âli) =it is cold.
ihi'laha-âli (F) =he is dead.
âohwé-eli (M) =he is dead.
chalala-ali =he is drowned, immersed.
ça'ru =hard, green, not yet ripe.
mu'ru =soft, overripe.
ka'luru =exposed or turgid glans.
ma'niçiku tibu' =false, lying thou art (m, negative; a'niçi, heart; tibu, thou hast).
mabuku =incompetent (perhaps="spineless" from abo, bone).
hâ'kuiyâ' =gluttonous, voracious.
nu'buiyâ' =(see above, but looks like adjectival form. Breton gives nulu'buiyâ'="engoué").
(b)aça'rua =to get drunk (thou).
(a)ba'raua =to call father, husband, master.
chi'rakua =to pierce, split, copulate.
(a)bi'nakha =to dance.

[1] The Island Carib seem never to have got farther than this. Five was expressed as "all one hand," 10 as two hands, etc.

pépéha' =? (perhaps related to pepeite, wind).
wärikad' =abduction, rape, taking of woman by force.
â'oli, (âori)[2] =dog.
ara'kuri =agouti [3] (*Dasyprocta aguti*).
bui'roku =pig (from Span. "puerco"?).
karatô', (karato'ni) =rat.
mâhlu'ri =bat.
méçu =cat.
pi'kuri =agouti [3]
hé'hwé =snake (generic. C only in "héhwé-congre").
wanaçaé =snake "tête-chien": Dominica constrictor.
ta'pu hu'a ="crapaud": Dominica's edible toad.
waya'maka =iguana lizard.
hina'ori =abolo [3] lizard.
huru'ma =anoli [3] lizard.
keke'meru =mabouya [3] lizard.
warai'ba =white land crab.
ba'khu, (ba'khri) =cirique [3] land crab.
yelé'u ="soft-shell" cirique.
u'tu =fish (generic).
han'nao =(local name) bourse: a fish.
haçu'lali =(local name) vive: a fish.
hépi =(local name) la queue: a fish.
i'çulu =river crayfish.
kata'ru =turtle (edible).
kuruné =(local name) grand'gueule: sp. snapper.
ma'buri =(local name) chaloupe: sp. shellfish.
maku'ba =(local name) têtard: sp. "flathead."
ma'wali (C) =(local name) tête-z'os, small vive.
çi'buli =(local name) nègre: dark-colored fish.
u'lika laka'bo =(local name) oreilles noires: sp. snapper.
waiba'rawa =shark.
waiwan'nao =(local name) vivaneau: sp. snapper.
wa'çu (C) =large variety river crayfish.
watëri'bi =(local names) tanche, tench.
ka'yu =domestic hen.
ka'turi =screech owl, "chat-huant."
ku'rapia'u (C) =small songbird.
çéçé (C) =small grassbird.
çiçéru (C) =Dominica parrot: *Chrysotis augusta.*
waku'kua =wood pigeon or ramier.
ya'bura =(local name) crabier: sp. heron.

It might be worth while noting here some of the commoner Creole names of obviously Indian origin (French orthography).

Animals: Manicou, agouti.
Crustaceans, fish, reptiles: Tourourou, cirique, agaya (crabs), balaou, coulirou, mombein, titiri, valioua, boubou (fish).
Birds, insects: Pipiri, cayali, iën-iën (Indian: ihenni; sp. fly).
Trees, plants: Acouquoi, acoma, cachibou, caconier, couachi, couroupoume, galba (*Calophyllum calaba*), louàrouman (*Ischnosiphon* arouma), l'arali (*Clusia* sp.), yanga, yatta(g)hou (*Syagrus amara* sp?), taouanhi (Car. orth. tawâ'i), calabouli.

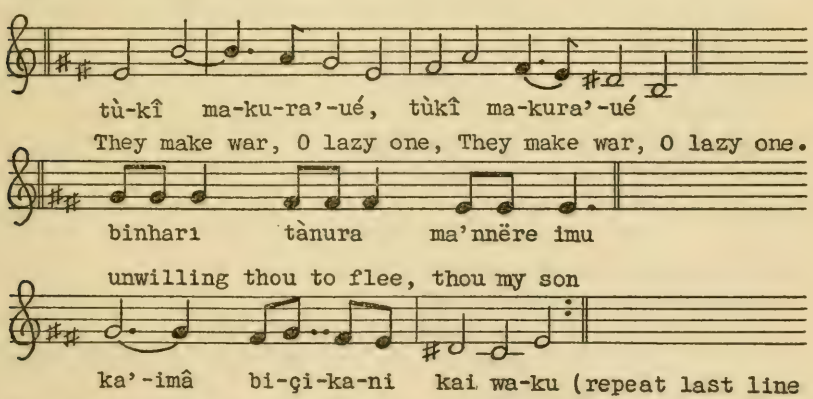
[2] Alonso de Herrera gave "auri" as the Indians' name for the native mute dog, now extinct.
[3] Words so marked seem to be themselves of native origin.

Moreover, such Creole patois expressions as "titac", tote, lélé (a swizzle stick), lolo (penis) probably derive from Carib: titaka, a little bit; totaka, to support; élé, energy; loloti, swollen.

Place names, principally those of rivers, were and to some extent still are Indian. Many, however, have been lost through constant rebaptism by new owners, while others, though still remembered by some, are no longer in general use. Thus Couanary has become Castle Bruce, Hiroula is now Blenheim, Cachacrou is Scott's Head, Mamelabou is Hodge's. The following are taken from the Carib quarter and its immediate surroundings.

aratu'ri (Atori, Ginette, French River).
aka'yu (Ma' Jenny, Raymond River).
çi'néku (same: a ridge).
kuçara'wa (Ravine Gros Rochers).
kué'rek (Maho River).
kua'nara (Ravine Viville).
wai'çima (same: a ravine).
kuça'rakua (Rivière Gaulette).
"mekeru" (old negro settlement).
saly'bia (Ste. Marie).
ay'waçi' (same: a ravine).
i'çuluka'ti (Cribiche, Crayfish River).
baraiçi (Bataka: place and river).
wai'nika (a ravine).
kua'ria (Big River: a dry ravine).
wa'raka (Atkinson).
pe'goua (same: river).
çiméri (same: river).
mantipo (same: river).
cachibo'nâ (Clyde River).
tu'lamô (Tweed River).

The following little song was taught me by Chief Jolly John, who learned it from Tanaze, now dead:


tù-kî ma-ku-ra'-ué, tùkî ma-kura'-ué
They make war, O lazy one, They make war, O lazy one.
binharı tànura ma'nnëre imu
unwilling thou to flee, thou my son
ka'-imâ bi-çi-ka-ni kai wa-ku (repeat last line

more slowly, softly and with more emphasis)

Come, take the lead. Come, wake up.

Bar lines divide into groups, not into bars. The meaning of the words was not known to the singer and I cannot vouch for my own translation.

PHRASES, ETC.

(1) ma'brika (ma'buika) kariphu'na, yuru-ha'o katu karrëhi'?
Greeting, Carib, Carib, content you? strength
(Are you well?)

(2) ite'lyë karrëhi (tuti *or* tuki karrëhi)
"so-so" strength (hardy).

(3) ti'aka (tiakha'ba) nia'bu u'tu
to catch I go fish

(4) ka'imâ waibu'ka a'kao-wa allia'gua
let us go away bathe (us) copulate

(5) ba'yu bu'ka (ha'yu bu'ka) a'kao bu'ka *etc.*
Go (thou) away (go you) go bathe

(6) ka'imâ wa-ta'bura tunë
let us go-us-draw water

(7) tabu' bu'ka tunë
draw go water

(8) en' ni-ta'bu na'ku
here is closing my eyes (I'm going to sleep)

(9) en ay a'takua, en ay-maeri
here thy drink, here thy food

(10) a'la kua'butu
I want a drink

(11) en kaï amulâi'
here let us appease it ("here's how")

(12) ruba' yete takërë tu'në ni-a'takua
give here some water me to drink

(13) makra'bu-ha'tina
thirst I have

(14) ni-lamâ-ha'tina
me hunger I have

(15) ruba'yte twa-twa nâ'iti nu'ni nuraka'e
give here plenty food to eat (for) my belly

(16) rubai paipaté puman iu'ti kumola'kha
bring go thou from thee a share to smoke (give me some of your tobacco to smoke)

(17) bi'riha-ali arhya'bu ri'cha
lightning tonight rears up (stands out, flashes, streaks)

(18) itê'ke karrëma'ti buinuha'ali nurakae
thanks powerful (for having) filled my belly

(19) me'keru k-hi'inçi ka'çi kamukuru (kama-, kamukulu)
negro stinks like grass-gourd (the last word was also said to mean a ghost or spirit)

(20) ibien' biam'buri ka'pa bi'nu
please four pence rum ("kapa" is corrupt English "copper", while "binu" is Spanish "vino")

(21) *pas chagrinez* (*patois*) hâbânâ': bai'-ba lakuriçi'
do not bother me not (imperative) go on the beach
lakarahi' ma'buri nu'ni
gather chaloupes to eat (chaloupe—kind of rock-shellfish)

(22) bai'-bai, hu'ya, bai'-bai: lakréâ' nu'bu (iubu)
go away, rain, go away; it is my wish my husband
(*or*) as much my husband
nuba'yahâ' (iubayahâ) â'ku amê'ti la'ku (limê'ti ba'ku)
I not jealous as (those) eyes
ba'tibu
thou hast (are of me) [1]

(23) nubuiâ'ru
she is no longer a virgin.[2]

(24) cemehé'êti bano'ki
good is thy ?

(25) Ba'yu ri bam-bam
Go make cassava bread

[1] This phrase seems rather obscure, though my informants were agreed as to the general meaning of the whole: that the woman was not jealous of her husband as the rain was jealous. I am very uncertain of the meanings of the two words "l-akré â" and "amê'ti"—or "limê'ti". The first seems to have the same stem as Breton's *ao-clée*, I wish; the latter to correspond with his *amouti* and *amenti*, celui qui, ceux qui, etc. On the other hand, the alternative—some of my informants gave the word as "limê'ti"—looks suspiciously like "mother-in-law."

[2] This looks like Breton's *nouloubouï-enrou*, given as "engouée"; but see above.

Basket making.

a, Hut in the Reserve. *b*, Refreshments with bamboo for beaker. *c*, Launching a canoe. *d*, Mixed types: Mother and child.

a, Working on canoe before hauling. *b*, Hand adz at work on interior of canoe. *c*, Preparation for hauling canoe.

a, Drawing "la pite." *b*, "La pite" fiber drying. *c*, *d*, Spinning the twine.

Carib types: *a*, Man. *b*, *c*, Girls. *d*, Woman.

Dominica Carib man and petroglyphs—Guadeloupe.

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What Happened to Green Bear Who Was Blessed With a Sacred Pack

By TRUMAN MICHELSON

WHAT HAPPENED TO GREEN BEAR WHO WAS BLESSED WITH A SACRED PACK

By Truman Michelson

Introduction

This account of a Sauk sacred pack was written in the current syllabic script by a Fox Indian, now deceased, many years ago. The English translation is by myself; and I have purposely adhered closely to the Indian original. Any marked deviations are enclosed in parentheses. The songs are given in roman type but the principles of the syllabary are followed. In 1924 Harry Lincoln told me that the sacred pack was among the Indians at Tama, Iowa, until 1897, when it was returned to the Sauks. He adds that the attached performance was something like the Thunder dance of the Bear gens. The ritualistic origin myth is similar to Fox myths. "Green Bear," the name of the one blessed, in the Fox dialect is A'ckipAgimA'kwA. That a shaman can understand children before they know how to talk (p. 165) is a common Fox belief. (See Fortieth Ann. Rept. Bur. Amer. Ethn., p. 343, note 29.) It is not many years ago when to my personal knowledge an ailing Fox infant was brought to a shaman by its parents to find out what was the matter with it. This belief also occurs among the Menomini (see Bloomfield, Menomini Texts, PAES., vol. XII, p. 43) and Omaha (personal communication of the late Francis La Flesche); it probably also occurs elsewhere. Speaking "to the rocks which he saw" (p. 167) is quite conventional in narratives of this kind. (See Bull. 89, Bur. Amer. Ethn., p. 53; Bull. 95, pp. 31, 73; Bull. 105, p. 131.) "He had fasted for 4 years" (p. 167) and "he looked at him the fourth time" (p. 167) is because 4 is the sacred number among the Foxes. (See also pp. 169, 176; compare Bull. 87, Bur. Amer. Ethn., pp. 5, 6.) The expression "who looked gentle" ((ä'ke'cā^{d}tcināgu'-sini^{d}tci) on page 168 is clearly intended as a prelude to the "Gentle Manitou" (Ke'cämanetōwA) on page 168. On the "Gentle Manitou" see Bull. 105, Bur. Amer. Ethn., pages 17, 18. Thunder-Sauk-Sacred-Pack (p. 169) is Neneme'kiwi-'Sāgiwi-Mī'cāmi. It may be well to recall the fact that (with the proper phonetic shifts) the Fox word for sacred pack (mī'cāmi) has precise equivalents in Sauk, Kickapoo, and Shawnee, but, as far as is known, in no other Algonquian languages.

"Those who shall have the sane guardian spirit" (p. 169) is "wī'-wī^{d}tci'sōmA^{d}tcigi" which may be freely rendered "those of your gens, your clansmen." In Fox this is a participial formation. Thus it happens that wī^{d}tci'sōmāitci'i "his fellow clansmen" (p. 169) is what is technically called an obviative. The speech (pp. 171, 172) contains some of the regular formulas (cf. Bull. 105, Bur. Amer. Ethn., p. 3, footnote 8). On page 172 the English "Comanches" in the Indian text is ko me tti A i, an obviative, the phonetic restoration of which is Kōmä^{d}tci'a'i. This is a modern Fox word; the old term, in the general case of the singular, is Pātō'kā'A. The Fox did not come in contact with the Comanche until after the removal from Iowa into Kansas. And the fight with them occurred in 1854. The enmity is projected backward in time. Putting foes to sleep by singing songs (p. 172) is a common Fox idea. (See Jones' Fox Texts, p. 11; Bull. 105, Bur. Amer. Ethn., p. 3.) It may be noted that the Fox stem keto- "growl" (p. 173) has equivalents at least in Cree and Menomini. The Fox did not come in contact with the Arapaho (p. 173) until after the former came to Kansas. I do not know the exact phonetic restoration of A ni la o ka i (Arapahos), the obviative plural. As long as the eating of raw snapping turtles is mentioned on page 175 it may be added that among the Menomini eating a turtle's heart raw is supposed to make a warrior brave. (See Bloomfield's Menomini Texts, p. 29.)

General familiarity with the published Sauk and Fox "literature" is presupposed; hence the above notes are very brief. For the Sauk it is sufficient to refer to the article Sauk by J. N. B. Hewitt, in Bull. 30, Bur. Amer. Ethn., pt. 2; M. R. Harrington, Sacred Bundles of the Sac and Fox Indians, Univ. Pa., Univ. Mus. Anthrop. Pub., vol. 4, no. 2 (reviewed by Michelson, Amer. Anthrop., n. s. 17, pp. 576, 577; reviewed by Skinner, ibidem, pp. 577–579); Alanson Skinner, Observations on the Ethnology of the Sauk Indians, Bull. 5, nos. 1–3, Pub. Mus. City Milwaukee (reviewed by Michelson, Amer. Anthrop., n. s. 26, pp. 93–100; 29, pp. 135–138), Michelson on Sauk social organization in the American Anthropologist, n. s. 37, p. 449, and M. R. Harrington, Old Sauk and Fox beaded garters, Indian Notes and Monographs, X, pp. 39–41, A bird-quill belt of the Sauk and Fox, Indian Notes and Monographs, X, pp. 47–50. A fairly full bibliography on the Fox Indians will be found in the Fortieth Ann. Rept. Bur. Amer. Ethn., p. 30 et seq. This could be easily greatly expanded, but the following additions are probably the most important items: Annals of Iowa, Third Series, IV, page 196 et seq. (from Soc. Anthrop. N. A. ed. Eggan), XIX, p. 115 et seq., p. 221 et seq., p. 352 et seq., XX, p. 123 et seq., p. 381 et seq.; Bulletins 85, 87, 89, 95, 105, 114 of the Bur. Amer. Ethn.; P. V. Lawson, Mission of St. Mark at the Village of the Outagamis located at Manawa, Wis. (privately printed; Menasha, 1901); T. Michelson, The changing character of Fox

adoption-feasts, Amer. J. Sociology, XXXIV, pp. 890–892, Sol Tax on the Social Organization of the Fox Indians, American Anthropologist, n. s. 40, pp. 177–179, Miss Owen's "Folk-Lore of the Musquakie Indians," American Anthropologist, n. s. 38, pp. 143–145; Sol Tax, The Social Organization of the Fox Indians, apud Social Anthropology of North American Tribes, Fred Eggan, editor, Chicago, 1937. [New linguistics are not cited; but an exception must be made in the case of L. Bloomfield's remarkable paper on Central Algonquian phonology, Language, I, p. 130 et seq.] Finally, though Sauk and Fox are closely related, nevertheless they are linguistically and ethnologically distinct.

What Happened to Green Bear Who was Blessed with a Sacred Pack

When he was 8 years old his father died. Thereupon his mother became a widow unreleased from death ceremonies; and she fasted. Moreover, he himself was made to fast. They both fasted the same length of time.

Now, when he was a boy, as soon as he was 10 years old, he understood little children who did not yet know how to talk. Soon it was known that he understood them. Whenever they were sick they were brought to him, and he told what was the matter with them. Surely, it is said, he told exactly what ailed them. Every one was very fond of him. He went around the people in a circle when he told them what was going to happen to the children.

And soon his mother took a husband. At the very time she took a husband he ceased to understand children. Then, it is said, the people on all sides wailed over him; and he himself felt as badly as possible. Soon he informed his mother, "Well, mother, by marrying you now have made the people wail everywhere. And you were fully grown when you remembered marriage. Verily, you have made the people wail, not I," he said to her. "Verily, I shall stop staying here where you live. I shall cease living with you," he said to her.

"Wherever you go, I shall go" (she said).

"I shall not be where our fellow people are" (he said).

"Wherever you die I shall die, for I am ashamed that I married" (she said).

"You will be that way for that reason. If you had not done so, I should not feel ruined in any way. That is what I say to you, mother. Verily, do not think of doing anything," he said to his mother.

She wept. "In that way you will make me wretched there," he was told. "No, mother, you and this husband of yours shall be fond of each other," he said to her.

Then, it is said, he started to go outside. He went in no particular direction. And he was scolded by his friend. "Now, my friend, do not think of going some place and dying uselessly. Do not think of abandoning your mother," he was told by his friend. Then he himself departed, and he went off as far as possible in one day. When he had gone off as far as possible on the eighth day he did not even carry anything to eat, but merely had his bow, his knife, and a stone ax. Precisely that, it is said, was the property he had.

He built a lodge somewhere where there was a large valley. The water was fine. Later on he built a small bark house. He placed the bark house in a different location. Just as soon as he made it, he became hungry. Yet there was nothing for him to eat, as he could not hunt. When he was suddenly hungry he merely kept lying down inside. Finally, it is said, he was made mindful. "Now very likely I shall die," he thought. He merely kept lying down. But he did not even remember his mother.

Soon, it is said, he went outside as if crazy. "I shall stop to look at the sun and sky," he thought. As he looked up above he saw something. "What, pray, may it be?" he thought. It did not fly around at all. Finally he lay on his back. Once in a while it fell from the south. But it seemed to be of the same size, and the distance remained the same. Soon he thought, "Now, it appears, I shall die." He went inside. "I shall cease looking at it," he thought, and lay down comfortably. "I shall place my body well," he thought, and lay down carefully.

As soon as he lay down nicely he lay blinded. This is how he became blind; it was after he had seen it. As soon as it fell toward him he surely saw it as he peeped. Surely he saw it. He saw through his dwelling. He indeed disliked looking at it. Soon he thought, "I shall probably cease to be conscious. Oh, if it should fall here, then very likely I shall cease being conscious." He disliked looking at it. As he lay down steadily the place by which he had entered opened and someone came in and stood where his own head was as he himself lay down comfortably. "I wonder who this is," he thought. In his sleep he did not examine it. And, it is said, he woke up early in the morning. He even had a headache. He felt dreadfully. He was hungry. Then he thought, "Who, pray, is this being? He will probably eat me as soon as I am dead. That is why he has jumped down from the sky, that is, the manitou who resides there."

And he departed. He went in no particular direction. He continued to run back and forth. Soon he lay down comfortably somewhere, for he was afraid of the spot when he came. Surely soon that being came into view. "Why," he thought as the other came where he was lying down. And the other lay down with his head pointing to him as he lay down. As soon as the other lay down with his head

pointing at him, he looked at him. Lo! It was a white hide tied up in a bundle. He opened it. Lo, it was a cooked fish. He began eating. When his belly was well filled he was strong and he departed. As soon as he arrived where he lived, he began to be very attentive. "I declare!" he thought. Then, it is said, he said, "Gad! I nearly died. That would not have come to pass for no reason. Surely, it must have been the manitou's thought," he thought. "Perhaps it is a fact that the manitou must have blessed me prodigally," he thought.

Then, it is said, he began to fast. Every morning he painted his face. He told everything which he saw, even the rocks which he saw, "I am wretched, my grandfather," he said to them. He made a grandfather of all things. He always did thus. As soon as he had fasted for 4 years, then the spot from which he came became a lake. It was a large lake.

Soon he dreamed. "Well, tomorrow you will see the one who blessed you, the one who gave wherewith to eat. 'I declare,' you will think. Tomorrow at noon, verily, you will come to him here. You will ask him for whatever you say to him," he was told in his dream.

And later on he woke up. At exactly noon he arose. "Well, I shall go and lie down," he thought, and departed. As soon as he got a view, lo, there was a being that kept standing upon one leg. The latter did not even see him. And as soon as he looked at him the latter became less in size. As soon as he looked at him the third time the latter became very much less in size. And as soon as he looked at him the fourth time the latter became very tiny. At that time, it is said, he at once spoke to him, "Well, if you are the one whom I have made my grandfather, you must bless me, so I think. You surely will bless me? But you shall have the power to think of me in whatever way you wish. I shall not know pity. But you are a manitou. That is why I say to you, 'You shall have the power over what you control.' Certainly, whatever I contrive to ask would not come (if you willed otherwise)," he said to his grandfather. "Oh, my grandson, you surely speak nicely," he was told for the first time by his grandfather. "Well, I bless you that you may live. At the time you were hungry, verily, I fed you. That is how I fed you. In person I fed you my food. Verily it helped you. Today you are truly in excellent health. And I think of you, my grandchild. Verily, I am proud. Verily, you must accompany me where I am going. You also shall go. You will come. I shall tell my fellow manitous that I bless you," he was told.

The Indian accompanied him. They went up above. When they came yonder the sky parted and they entered by this means and followed a road from there. Yonder they saw a lodge. They entered. This is how they entered. He felt as gentle as possible. He saw a

man who looked gentle. And the one by whom he himself had been blessed began to speak, "Well, I bless this our grandchild. This, verily, is why I bless him. He was extremely ill. Verily, I fed him what I eat. This is how I think of him, that he attain hoary old age, that he continue for a long time to be with his fellow mortals. I so bless him. And if he fights against his foes, he shall never be shot. And I shall give him songs, my very own songs of which I am fond. And this is why I give them to him, that he will be helped by them whenever he thinks of anything. Whatever he thinks the same shall be. That is why I give him my songs. If his body is in any way in peril, well, he shall merely sing. Exactly whatever he desires shall happen to him. Nothing adverse shall happen to him. Even if he falls down to die in a certain spot, it will not be possible. He shall survive. That is how the songs which I shall give him are to be. Moreover, I shall give him dancing songs. If he is at all happy he shall make the people dance. And if he kills many of his foes he shall make the people dance. Well, anyone shall dance. Not only he shall dance, but everyone, a woman, a child, as many as are happy and mortal shall dance to my songs, That verily is how I bless this our grandchild," he said to the Gentle Manitou.

The Gentle Manitou spoke: "Well, you have surely gladdened me by what you have done. I am glad that you have blessed our grandchild. 'Now he really has pleased our grandchild by blessing him' (is what I think). Verily, I too shall bless him. Exactly as you blessed him; you merely blessed him in the manner I helped you. And in giving him these songs," he said to him, "you have also pleased him. Our grandchild will always remember you. Verily you shall go and exist as a mortal with our grandchildren. You will place your body there. But those who live here on the earth shall accompany you," he was told. "Now you must continue to lead this our grandchild downward. As soon as you shall quietly come yonder, you shall give him something. He shall continue to take care of it. It will carry him. You will firmly tell him to remember it," the one who blessed the Indian was told. "Oh, I shall do exactly that," the latter said and led the Indian downward. Then he brought him where he lived.

Thereupon he told him, "I give you this my body." As soon as (the Indian) was told that this identical sacred pack was there, "I shall go and think of you from there. I shall never forget what you tell me. Verily, at the time when ye shall have ceased to remember it, ye shall cease to think of me. But I shall go and speak to you at the distant time when this earth is old, not before that time, surely not beforehand. If you soon throw it away, at that time I shall surely tell you," he was told. "This, verily, is what will happen to you. You will know even the songs. I shall not tell you of them in detail

here. You will know them from your heart," that man was told. "In the same way you shall know what you are to continue to do and what you are to say if you worship," he was told. "And you shall name this sacred pack 'sacred pack.' You shall tell those who shall have the same guardian spirit as you (i. e., those of your gens). This is what you shall name it for them, 'Thunder-Sauk-Sacred-Pack.' That is what you shall name it for them. For you shall tell the news. And now I shall tell you something else which you shall always do if you are first in great fights," he was told. "Verily, you shall lead a war party four times," he was told. "And you shall continue to heal those who are sick. Even if anyone breaks his bones, you will heal him. Even if he has tuberculosis, you will also cure him. No matter what his ailment may be, you will continue to cure him. You will not even think those sick will be difficult to cure. Even if anyone ceases to be conscious you will restore him. That is how powerful my blessing is. That is the way you shall continue to do. My mouth shall not speak falsely, not even one mouthful," he was told. "Surely you must do as much as I have told you. I am telling you the truth in what I say to you," he was told.

As soon as he was told that he only saw smoke rising upward. Then, it is said, he picked up the sacred pack on his way and brought it inside his dwelling. And later on he went off. Eventually he went whence he had come. When he arrived yonder he merely saw old, scrubby grass. "Why," he thought. Then he went about carrying his sacred pack on his back. And he went off blindly. He lay down at night near the bushes. Then he was told by an owl where he was to go. "My grandchild, this is where people of your own language have a town," he was told. "Here, to the north, not far off, they have their town. You will be on your way for several days. Then you will come there. And even your relatives will be lonely for you," he was told. "Finally, my grandson, you will sing of me, as I please you this day. This is why I tell you." As soon as he was told that, the other began to fly off.

Now, when he went in that direction, sure enough he came to a Meskwakie town. Then he covered his sacred pack as he was carrying it on his back. He concealed it as he approached some old wigwam. Now it is a fact, it is said, it was exactly where his mother lived. So he went in. But, it is said, they did not recognize each other. He was surely told, "Hello!" by a man. He himself recognized the other, but he was not recognized. As soon as he was fed he began to speak. Then indeed the woman rose to her feet and went to kiss her son.

Then in 4 days he held a gens festival. He summoned his fellow-clansmen. As soon as they were seated in a cluster he told what had happened to himself, that he was hungry, and how it was that he was blessed. When he was fed he gave another speech. After he

had spoken he said to the members of his gens, "Oh, the manitou did not bless me for a short time when he took compassion upon me. This, verily, is how far he thought of me: at whatever time there shall cease to be a people is how far he thought of me. He, the one who blessed me, gave me his songs; he did so in person so that he would not fail to hear me. That is what he said to me; that he would hear me, is what he said to me. You must carefully and thoroughly learn by experience these songs which you are going to have. Remember them firmly. Do not think, 'I am not worthy to know them.' " He began to sing. But he blew the flute four times. As soon as he had blown the flute he sang.

This is how he sang the first song:

Whosoever fails to remember me;
Whosoever fails to remember me;
Yo o o; my grandfather;
Whosoever fails to remember me;
Whosoever fails to remember me.
[Wa wa ne ne mi ge ni;
Wa wa ne ne mi ge ni;
Yo o o ; wi na yo ne me do me sa;
Wa wa ne ne mi ge ni;
Wa wa ne ne mi ge ni.]

Wa ne ni no wa ne ni no wa ne ni no;
They bless me, yo, the thunderers; my grandfathers;
Wa ne ni no wa ne ni no wa ne ni no.
[Wa ne ni no wa ne ni no wa ne ni no;
Ne ke ne me ko ki yo ne ne me ki wa ki ne me do me sa ki;
Wa ne ni no wa ne ni no wa ne ni no.]

I was made to go around; the one who goes around this;
I was made to go around; the one who goes around this;
He, this sky;
I was made to go around; the one who goes around this;
I was made to go around; the one who goes around this.
[Ki yo sa i ki ki yo ki yo sa ta ma ni;
Ki yo sa i ki ki yo ki yo sa ta ma mi;
Wi na ki de ge ye;
Ki yo sa i ki ki yo ki yo sa ta ma ne;
Ki yo sa i ki ki yo ki yo sa ta ma ne.]

I make the manitous sorrowful;
I make the manitous sorrowful;
I, my friend, was made to stand on this earth;
I make the manitous sorrowful;
I make the manitous sorrowful.
[Ki wa ki wa tti na we A ke ma ne to wa ki;
Ki wa ki wa tti na we A ke ma ne to wa ki;
Ni na ni ka ne wi na A ki yo ne ma swi i ki;
Ki wa ki wa tti na we A ke ma ne to wa ki;
Ki wa ki wa tti na we A ke ma ne to wa ki.]

And then they danced. And this is how the songs go:

All the tree-men are dancing;
All the tree-men are dancing;
All the tree-men are dancing;
All the tree-men are dancing;
I; the tree-men bunch their heads together;
All the tree-men are dancing;
All the tree-men are dancing.

[Tta ki me te gi ne ni A ki ni mi ni mi wa ki;
Tta ki me te gi ne ni A ki ni mi ni mi wa ki;
Ta ki me te gi ne ni A ki ni mi ni mi wa ke;
Tta ki me te gi ne ni A ki ni mi ni mi wa ki;
Ni na wa wa ne te ge se waki me te gi ne A ki;
Tta ki me te gi ne ni A ki ni mi ni mi wa ki;
Tta ki me te gi ne ni A ki ni mi ni mi wa ki.]

I am raising my hands up;
(Repeat six additional times)
[Tti tti ki ne ke sa ya ni;
(Repeat six additional times.)]

From where I dance for the first time, to be sure;
(Repeat five additional times)
[We te ka i ya ni A tta wi na
(Repeat five additional times.)]

A ta mo ya ni
(Repeat four additional times)
Ma ni yo ma ne to wi
("This mystic power")
A ta mo ya ni
(Repeat three times)
A ta mo ya
A ta mo ya ni.

And the eating songs were:

I go about eating;
(Repeat seven additional times)
A human being, a human being;
The one whom I shall eat (i. e., kill);
I go about eating;
(Repeat five additional times)
[Ki wi se ni ya ni;
(Repeat seven additional times)
Me to se ne ni A me to se ne ni A;
Wi A mwa ke na;
Ki wi se ni ya ni;
(Repeat five additional times.)]

That is as many as the songs are. When this is done, when worship is held, this is what the one worshipping says:

"Oh, so be it, our grandfather, so be it, our grandfather who dwells above, so be it, is the one whom we worship. Verily that we may

exist as mortals for a long time is what we desire of him; oh, so be it, we shall think alike, so be it, so that we shall gladden, so be it, our grandfather.

"All of us who are mortals must always feel that toward him in order that we may make him merciful. We must always think steadfastly of him so that he will make a donation to us, that he bless us with life. The reason why we are holding a gens festival is so that he in person shall listen to us here. That is how his nature is. That is why he sits here. He is permitted to do so by his fellow-manitous. So that is why he is here. That is what he was told, that he should watch over us here where our chief has a town. And if any one talks against us, he shall not speak truthfully (i. e., be unsuccessful with his imprecations). And that moreover we be not customarily sick is what we desire of him, so be it. You must always, so be it, sit and think in one day as long as we worship. Think exactly that, men, and you, too, women."

That is how the speech is when there is worship, when this holy hide is worshipped.

And a long time ago the Meskwakies were surrounded by the Comanches. Eleven was the number of the families. And the one who made this sacred pack was there. They were surrounded. That they all would be killed, is what they thought. At night they held a gens festival. "You are not to sing: you are merely to dance once. As soon as I stop singing we shall depart. But you must dance vigorously. You must open my sacred pack. You shall make an offering to our grandfather," he said to them when it seems that they were surrounded. It was impossible for them to go out, it seemed. And at midnight he gave a dance. "I shall use one song," he said.

A te mo ya ni
(Repeat three additional times)
Ma ni yo ma ne to wa ki
(This, yo, the manitous)
A te mo ya ni
(Repeat three additional times.)

Thus he sang, and the Comanche all slept. And they themselves escaped. They were not, it is said, seen by any one; nor was it known whither they continued to go. Their dwellings were all burned.

And as soon as he came yonder, he forthwith held a gens festival. He held a gens festival when it was daylight. "I shall burn them out so that they who nearly killed us shall come toward us," he said. "You verily will see how many there are. Do not think that they will get the better of you. You shall slay them all. That is the way you will treat them. They will wake up here at the end of the village. While they are fast asleep you shall begin to strike them down," the youths were told.

Sure enough, early in the morning while many were lying asleep in a heap the others began clubbing them to death. At last there was (but) one. They were about to slay him when the Comanche turned into a grizzly bear. He began to growl and rushed to attack them. And one man who was unable to begin to flee was told, "Stand and fear (i. e., fight) him." Soon he was rushed with an attack. And he rushed against the other. Soon the grizzly bear was held fast. He was wounded as soon as he was properly held. As soon, it is said, as he was properly held, he was made to cry. "That's the way I make a woman bawl," he was told. "Lo, it must be a female grizzly bear. If it were a male he could not have been made to bawl," he said to him. And indeed, it is said, he killed him. And as soon as (the Meskwakie) had killed him that grizzly bear became an Indian.

Many Comanche were killed. Not even one was saved. All were killed.

And moreover, when there was a war party this sacred pack was taken along. Many youths and men accompanied the party. And the one who carried this sacred pack on his back was always the leader. He always traveled all day long. Finally it was 8 days since they had eaten. "Well, now we shall eat," he said on the eighth day. "But tomorrow early in the morning is when we shall eat," he said to those who accompanied him. "What will I eat now?" thought some one who, it seems, did not bring anything wherewith to eat. The next day their heads were where the bundles were. And the one who carried this sacred pack on his back said, "Untie each one at the same time." When they untied the bundles there were cooked fishes. All had their bellies filled. After they had eaten, he said to them, "Well, men, this very one who fed us is the one who is in my sacred pack. He is the very one we eat. So finally you must begin to hunt. Now, as long as you are on your way, do not fear anything. You will kill something and we shall eat. After we fight against the foe, then we must keep up a fast pace on our way home. Today, however, we must continue slowly on our way," he said to the men. "That is what I say to you," he said to them.

Then he put his sacred pack on his shoulder and went off. Finally they continued to hunt for game animals and killed many. As soon as they had camped they did much roasting and ate bounteously.

Then, it is said, they soon came where the Arapahos were. There were many lodges. "Well, when it is after midnight, then we shall begin striking them down," the Meskwakies said. As soon as it was past midnight they began to strike them down. They killed most of them in a hurry. Soon it was learned how few they were, and they were surrounded. They stood in the middle bunched together. They began to shoot arrowheads in a lively manner. Soon they were told, "They will not hit us"; so they were told by the leader of the war party.

Soon they were told, "Well, perhaps now you have had enough of fighting. We shall all jump up at the same time. Let no one fail to jump up. You must jump up. We shall depart. I shall be really white; wherever I shall continue to go, you shall go. Hold your bows and arrows in your mouths," he said to his friends. That is exactly what they did. As soon as all had them in their mouths then he had his sacred pack in his mouth. "Now," he said to them. They all jumped up at the same time and they traveled from there at high speed. All got out and they flew around mixing with each other. "Void faeces upon the foe," they said to each other. They voided faeces upon them. They escaped and all were carrying something in their mouths as they flew up above. When they arrived up above as far as it was possible then they went to the earth. Then indeed, it is said, they lay down.

As soon as they ceased coming out they were very tired; that is, their wings were. Well, they lay there for 2 days. On the second day they began to feel like smiling. They were told how they had voided faeces upon the foe. It is said faeces fell upon the heads of some of the Arapahos. And some were struck on their faces. That, verily, it is said, is why the Meskwakie laughed. And they urinated on some from there.

And after they had given full explanations, they departed. "Well, now we shall go home," he said to them. "We must go a little faster," he said to them. Then he put his sacred pack on his back and started to begin to run. Then indeed they all started to run. They always had the same rate of speed while running. Finally early at night he halted in his running. Immediately they camped. "Hunt," he said to them. The men hunted at night. They killed many turkeys and then they roasted them. All ate one turkey apiece. "You must eat all of them" (they were told). They slept for a little while. Early in the morning they were told by the one who had the sacred pack, "Men, wake up, we must depart." They all woke up suddenly. "We must go on a little faster," he said, and started off. Surely they ran fast. At noon he halted running at a big mountain. "Well, you must all stop to urinate and void faeces," he said. They urinated and voided faeces mightily. The length of time it takes for one who urinates and voids faeces slowly to do so is the exact length of time they halted.

And, it is said, after they had gathered, they were instructed, "Now, men, do not think, 'we are going at a fast pace for fun.' A manitou is pursuing us. That is why I want you to hurry," he said to them. The men were afraid. They were all afraid. And so, it is said, they went at full speed. They halted for a short time at night.

Very early in the morning they were told, "Now, men, we must depart. We must run faster," he said. Surely they ran at full speed. They were again told at noon, "Stop to hurriedly attend to nature." They hurriedly attended to nature. As soon as they had attended to nature they traveled on.

Much later, at night, he halted in his run where a creek flowed by. Then, it is said, some were hungry. "Now, men, hunt for snapping turtles," they were told. "You must all eat hurriedly one apiece. That is the exact amount you must eat, men," they were told. They ate the snapping turtles raw. They were exactly of the same size (i. e., the snapping turtles). As soon as they had eaten them, the one who had the sacred pack said, "Now is the last time. But we must go as fast as we can. If we come to a stony mountain, then the manitou will not slay us. Then we shall as if overpower him," he said. "You shall be strong. As soon as it is midnight then we shall depart. If, however, we discover (the pursuing manitou), then I shall save you," he said to them.

They started off after midnight. At first they traveled slowly, and as it got toward morning they continued on their way at full speed. Soon they were going as fast as they could. Then, it is said, some were tired. Now, at noon, it is said, they saw a stony mountain. "Yonder really is where we are going," he said to his friends. As soon as they ran close by, as they looked backward they surely saw a white otter. It was very white. "There he is. Go fast," they were told by the one who had the sacred pack. As soon as he arrived in person the men ran up the hill. "Now indeed we are ahead of him," he said to his friends. Then, it is said, the white otter became much smaller. Soon it cried out loudly and began to go away. "Now, men, hunt. You must now cease to be afraid of anything," he said to them. And the men had a great hunt. Well, they killed two deer. As soon as they had killed them they began to roast them on spits; and they roasted them. Well, it is said, they ate those two deer.

They stayed there several days. As soon as they had eaten heartily they went on. And, it is said, they came yonder from where they had departed. All the people were glad.

And the one who took care of the sacred pack began to doctor his fellow-Indians a good deal. Surely he continued to cure them. He cured very hard cases. Even, it is said, when they had broken bones he cured them. He was able, it is said, to make the bones grow together. And, it is said, he was loved by all the people, and he was feared. And even when he became an old man he did not marry. He always remained a bachelor. Yet, it is said, he was repeatedly given maidens, but, it is said, he did not desire to marry. And his name was Green Bear. That was his name. And, it is said, he began

to be ill. He became ill very quickly as he was an old man. He became worse, and, it is said, he was doctored by any one, as he was an old man. Soon, it is said, he doctored himself. As soon as he knew how he had been treated, he told the news when he was well. "Well, I declare, a long time ago the manitou must have begun to bless us. One blessed by a manitou is the very one who nearly killed me, one who knows an evil medicine. He is the very one whom you will call 'witch.' One who does that will always be with you. One who does that shall never disappear. He is the one who will continue to kill us. Also he has the nature of a manitou. But he will never have any mercy upon us. He will always continue to kill us. He will not even have mercy upon a child. He will kill it, that is, the one who does so, the one who knows an evil medicine. Such a one is not even fearful of me. He has tried to witch me. So I have full knowledge of a person who acts like that when he is blessed by a manitou. At night he surely has the nature of a manitou. I am not just talking. Verily, blindly fear him, people," he said to them. "Thus you shall continue in succession to tell each other of him. And let no one of you accept from him whatever he may give you. You will make yourselves wretched if you do that, if you accept it from him. That is how it is. That is the message I give to you. You shall merely remember firmly this sacred pack of ours," he said to his fellow clansmen.

And soon he again instructed them later on when he was an old man. "Clansmen of mine, you know that I have now reached an old age. Surely the manitou blessed me. If I die, I am not to be buried. I shall sit in the open. But wherever there is a separate mountain, you shall bury me (in that position). In 4 days I shall disappear. You will not see me. Now I must depart. I shall go to the land of the manitous. But you must firmly remember this sacred pack. You must always hold gens festivals with due solemnity. This is what you must do. You must never establish a new way. And these nine songs: exactly that shall be their number. There never must be more. But you must always remember our future boys. You must tell them to keep this up. Do not think of changing the rules in any way. You must tell (our boys) exactly what I have been telling you. This day I shall as if go somewhere for a while. It is certain that as soon as I finish speaking I shall die," he said. As soon as he finished speaking he died.

After he had been dead for 4 days they went to look where he was. There were merely marks on the ground. He had disappeared. All the people waited, and lamented Green Bear. That is the end of the story of a sacred pack called "Thunder-Sauk-Sacred-Pack."

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Lemhi Shoshoni Physical Therapy

By JULIAN H. STEWARD

LEMHI SHOSHONI PHYSICAL THERAPY

By Julian H. Steward

Description of primitive therapy is likely to emphasize supernatural causes and cures of disease at the expense of simpler practices of physical therapy. The present paper is based upon an inquiry concerning the latter among Lemhi Shoshoni of Idaho.

The causes of disabilities, unless attributable to supernatural agencies or to obvious injury, were little understood. Ordinary remedies were first tried for any illness. The illness was believed to have been caused by soul loss, intrusion of a foreign object, or witchcraft, and was treated by a shaman only when it was serious and lingering. Shamanistic treatments will be described elsewhere.

Ills were classified by a simple descriptive terminology which usually referred to the ailing part of the body rather than to general categories of sickness. The term nütsi, ill, was affixed to the term for head, heart, lung, etc.

Remedies were few and elementary. They comprised administration of herbs, both internally and externally, massage (called nadokunt), application of heat, and bleeding. The last was, until recently, used only for head and eye troubles. Occasionally the sweat house was used for general debility.

Some remedies were administered by anyone. The use of others was restricted to specialists. Most specialists acquired their knowledge through experience, though some, like the massager or tumgaunait, seemed to have dreamed their powers. Unlike the true shaman or puhagünt, however, the specialist did not sing and though his skill might be of supernatural origin, his cure was purely physical. He was named according to his specialty, for example, bui nait (bui, eye+nait, making), an eye doctor. The only supernatural element involved in physical therapy was the patient's prayer when taking a remedy, "I am drinking (or applying) you for such and such a purpose."

Treatment of the different parts of the body was as follows:

Head ailments, especially headaches, bambi (head) nütsi. Cause, unknown. Cure: roots called pa (water) sowü'ü which grow along streams in the mountains were pounded and the emulsion mixed with warm water and tied on the head with buckskin. Manner of effecting cure unknown. If this failed, the inside of the nose was punctured with an awl to cause bleeding.

Eye troubles, bui (eye) nütsikwᵘ, were of several kinds. For sore and inflamed eyes, the root of a grayish plant about 3 feet tall with vertical leaves growing close to the stem, called pavohop (possibly *Artemisia gnaphalodes*) was pounded, mixed with warm water, and the juice squeezed on the eyes. If there were sore veins (?) in the upper and lower lids (trachoma?), the lids were scraped with sharp obsidian and allowed to bleed. Only experts performed this operation. If small white spots had formed on the eyeball (cataract?), a grayish willow called agai (salmon) suhu (willow) which grows along the Salmon River was burned and the fine ashes applied to the eyes. Eyes which were sore from the glare of the snow, especially in the spring when the sun is becoming bright, were thought to be infected by little specks of dust, buisi, left on the surface of the melting snow. This ailment was called buisi ümbukun (cause). Leaves of hunap (probably *Cowania stansburiana*) were boiled and the face with the eyes open held over the steam.

Nose troubles were not known.

Toothaches. Cause, unknown. The belief that a worm had gotten into the tooth was not held. There were three remedies: 1, leaves of *Artemisia tridentata* were chewed to ease the pain; 2, a heated stone was held on the face over the pain; 3, a loose tooth was extracted by attaching one end of a vegetable fiber string to the tooth, the other to a stick, and pulling.

Heart trouble, bixhü (heart) nütsi. Cause, unknown. Cure: a large stone was heated and placed over the heart.

Chest pains, especially stabbing pains that hurt when one moved, were called tu'inawün:üx (tu'inap, stick+wün:üx or wün:ükwᵘ, stuck with a point). This and other chest ailments were treated by laying a heated stone on the chest.

Abdomen. Ailments of the various internal organs, except heart and chest, were not distinguished. Those in the region of the abdomen involving aches were called wö:ra (abdomen) nütsi; those involving bloating were called wö:ra begwix (swell). Causes, unknown. To stop diarrhea, which was called kwahucu, the fine silt which dries on the top of a boulder after a rain and slightly curls (called tumboämb, tumbi, rock+?) was mixed with white clay (evi) and drunk. For a physic, the roots of a plant about 1 foot high with white flowers (called togoa, rattlesnake yuŋgüwü, serrate leaf; possibly crane's bill) were boiled and drunk. For a physic which also produced vomiting the roots of a sunflower (called pi:akənzip:) were boiled and drunk. No doubt other herbal remedies were used for internal disorders. Following the use of these remedies, the ailing spot might be massaged with the heated green leaves of young sage (*Artemisia tridentata*, called pagwiəmp).

Arms and legs. For pains, leaves of *Artemisia tridentata* were pounded, heated, tied on by means of buckskin and left overnight. If this failed, a specialist (not a singing shaman) might be called to massage.

Broken bones. In a case of a broken leg described by the informant, a specialist (possibly having the power of tühümüi, a bluish or black lizard), but not a true shaman, washed the wound, set the bone, cut the flesh around the break which was at the ankle, and put the dried pulverized remains of a certain species of lizard under the skin. This lizard, which was traded from southern Nevada, was believed to bind the broken parts. (A Shoshoni doctor at Elko also had a dried lizard from southern Nevada which he used for wounds.) Some doctors did not use this lizard. In the case described, the invalid was kept in bed two months and his break healed.

Wounds. Regardless of size or cause, wounds were always treated by applying pulverized pine pitch and holding it in place by means of buckskin. This dressing was changed every 4 days. The pitch was believed to act as adhesive and was probably also curative. There was no means of sewing large wounds. Ants were not used to bite the edges of wounds together.

Fevers. Two kinds of fever were distinguished. Those producing a red rash (called anga, red+tasia, insect) were considered dangerous and were treated by drinking a weak tea made of pasowü'ü. Those which resulted from grippe or colds (called onivukun) were treated with *Artemisia tridentata*. Fevers had no general name. Those not falling into the above two classes were said to have been caused by a ghost (dzoap) and were treated by a shaman.

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Panatübiji', an Owens Valley Paiute

By JULIAN H. STEWARD

PANATÜBIJI', AN OWENS VALLEY PAIUTE [1]

By Julian H. Steward

Introduction

In 1934 the writer supplemented an earlier ethnographic sketch of the Northern Paiute [2] of Owens Valley, Calif., with two autobiographies [3] procured from aged informants, both of whom have since died. An opportunity to obtain further biographical material came during field work in 1935. The new biography is that of Panatübiji', a Paiute man who matured before the settling of the white man in his country and who died at a ripe age in 1911. The biography was procured from Panatübiji''s grandson, Tom Stone, a native ethnographer of sorts, whose keen interest in Paiute culture and remarkable memory for information obtained from his grandfather had made him an invaluable informant. When Tom Stone was a small boy his father died, leaving him to be reared by his grandfather. During long evenings Tom eagerly listened to his grandfather's stories of aboriginal Paiute life and Panatübiji''s own varied career.

Tom Stone reproduced the biography as closely as he could remember it. To be unable to give episodes in precise chronological sequence is characteristic of the Paiute, who lacks an historical sense probably more than most Indians, although he may remember particular events in great detail. Even the profound disturbances caused by the arrival of the white man about 80 years ago have produced a sense neither of tribal nor individual history. Biographies are always elicited painfully, by means of concrete questions relating to different kinds of events. Consequently the order of events in this biography is established through inference as often as through an idea of proper sequence obtained by Tom Stone from his grandfather. That this lack of a sense of continuity did not result from the second-hand nature of the material but was inherent in the Shoshonean attitude was evident from other investigations in the Great Basin where, of some 45 informants, not over 2 or 3, who had been in close contact with white men all their lives, were historically minded.

[1] This biography was procured during ethnographic investigations among the Great Basin Shoshoneans in 1935. The field work was financed by the University of California and a grant-in-aid from the Social Science Research Council.

[2] Ethnography of the Owens Valley Paiute, Univ. of Calif., Publ. Amer. Arch. and Ethn., 33 (3):233-350, 1933.

[3] Two Paiute Autobiographies. Univ. of Calif. Publ. Amer. Arch. and Ethn., 33 (5): 423-438, 1934.

Panatübiji''s Biography

Panatübiji' was an Owens Valley Paiute. He was named for the Fish Springs community and band, Panatü (pa, water+natü, place), where he was born and of which he was later chief. The duration of his life may be estimated only roughly. By 1850 he had been married once or probably twice. By 1871, the year of the great earthquake, he claimed to have been past middle age. At his death in 1911 he thought he was more than 100. He was therefore probably born about 1820, some 30 years before the white man began to settle his country.

Panatübiji''s mother was from West Bishop, the village called Paukamatü (pauka, gravel bluff+witü, place) of the Pitana patü ("south place") band and his father was from Panatü. They met at Panatü when his mother came down from Bishop to gather kuha, a wild seed, on the hills west of Fish Springs and Black Rock. Panatübiji''s father, attracted by the girl, gave money to her family who approved of the match and reciprocated with presents. Later they were married at Paukamatü and lived for some time with the bride's family before moving down to Panatü, where Panatübiji' was born. Panatübiji' had a sister, Joe Westerville's mother, and a half brother, Jim Olds.

Panatübiji''s instruction came from his father, who was a famous hunter. He was first taught to shoot rabbits and smaller game in the valley and later, when he had grown stronger and more experienced, to hunt deer and sheep in the mountains. He was also taught nature lore and the place names of the mountains and springs.

When Panatübiji' killed his first deer he took it to his uncle, who made a large loop of the entrails and lowered it over the young man's head, wishing (i. e. "talking") for hunting success and luck. Panatübiji' was not permitted to eat any of this first kill and was instructed that henceforth he must not eat deer heart, lung, tail (napia, i. e., the rump, including the tail), nor some internal section which attaches to the ribs and backbone and separates the heart and liver, because these were reserved for older persons.[4] He was also told that when a hunter killed any large game he might retain only the ribs, exclusive of neck and forelimbs, for himself, and that he must distribute the remainder of the animal among the other families in the village.

Panatübiji' was first married after he had hunted in the mountains for several years. For some time his family had urged him to marry, but he had no desire to do so. Although a competent hunter he was still a young man, disinclined to assume responsibility. He lacked, moreover, all comprehension of sex. He did not oppose the marriage, however, and his family arranged to procure him a wife from Panatü. They paid shell money to her family, who reciprocated with food and

[4] The same taboo applied to young women.

other goods,[5] and Panatübiji' began to share his kills of game with his future bride's family.

When Panatübiji' and the girl married they resided 6 months or a year with her family, then moved to his parents' house, where he felt that they would be more welcome. Six months later Panatübiji''s parents took the married pair to Tünemaha and gave them a hut.

Until now, Panatübiji' had discovered nothing about sex. He regarded his wife as a comely and companionable person, but did not understand the reason for marriage. Alone in their new home at Tünemaha, however, his wife quickly taught him to consummate the marriage.[6]

Later Panatübiji' and his wife returned to live near his parents, but occupied a separate house. After several years, domestic discord, arising largely from his wife's sterility, led them to separate.

Panatübiji' received his first vision about the time of his marriage.[7] He dreamed that he was far away in a strange country, leading a group of fighters who had become exhausted. When he called upon the "great spirit"[8] for help, a huge mountain opened, and when Panatübiji' led his men into a large cavern the entrance closed behind them. After resting in safety, Panatübiji' again called upon the "great spirit." Above them appeared an opening through which they were carried by a great whirlwind and set down on the earth in their own country. This dream gave Panatübiji' power to protect himself from danger, especially in battle.[9]

Two other visions or powers also came to Panatübiji' when he was a young man. In one dream he found himself in the mountains with a conflagration sweeping the land and threatening to consume the entire country and destroy him. When he requested the great spirit for rain a downpour promptly extinguished the fire. Panatübiji' said to the spirits, "Now you have done what I asked. We have a fine country here. Nothing will ever happen to me or my country." This dream gave Panatübiji' a special power for extinguishing fires.[10]

[5] This established a *mukici* relationship between the parents-in-law.

[6] It is remarkable if true that a year or more should have elapsed before marriage was consummated. Tom Stone could not explain how Panatübiji' had failed to learn the nature of sex before this, but said he had heard of 1 or 2 equally uninformed Indians. Such ignorance is almost incredible in view of the opportunities any Indian has to observe animals in nature and to hear circle dance songs, some of which are brazenly descriptive of the sex act, and the vagina dentata myth theme which is a major feature of the creation story. There is no reason, however, to doubt that Tom Stone's information from his grandfather was correct. This is an extraordinary beginning for a man who was to be married 5 times.

[7] The vision or dream comes to the Owens Valley Paiute unsought during natural sleep.

[8] This is vaguely described as something connected with the east, perhaps dawn, the morning star, or the sun.

[9] It is possible that this came to Panatübiji' in the eighteen sixties during the wars with the white men, for in aboriginal times the Paiute seem to have done little fighting.

[10] It is curious that, in this sage-covered country, where it is impossible to force a fire to spread or do damage, this power should have come to Panatübiji'. It is interesting to record that in Panatübiji''s old age his grandson, Tom Stone, inadvertently set their grass house on fire when Panatübiji' was a short distance from home. The house and its contents, including two rabbit-skin blankets, were destroyed, in spite of Panatübiji''s efforts to extinguish the fire.

In the other dream Panatübiji' was on Birch Mountain (Pau'okud-auwa) and heard a voice speaking in Paiute. Wondering about whence it came he went toward it and heard it say, "Nothing will happen to me. I will live to be old. The country is clear. Nothing can kill me." Panatübiji' thought that this was a person talking to himself and sought to find him. Peering around a rock, he saw a crack with a bubble of saliva coming out of it. He put his ear to the crack and found that the voice came from within. This dream gave him longevity and protection from sickness, other than ills caused by accidents or evil magic.

Only one native conflict was related by Panatübiji'. The South Fork Indians, Tubatulabal, once came into Owens Valley to raid Paiute villages. A Paiute from the southern part of the Valley recruited a war party from various villages to the north and the warriors went somewhere below Owens Lake to avenge themselves on two of the invaders who had lingered to hunt rabbits with a line of traps. The Paiute spread out in a wide circle and waited to enclose the men. One of them, forewarned of danger by some supernatural power, had refused to risk his life, and returned. The other, who had scoffed at the danger, was killed. The Paiute removed his entire scalp and carried it home, but held no ceremony in connection with it, eventually losing it.

About this time Panatübiji', with several other men, made a trading expedition across the Sierra Nevada Mountains to the Western Mono.[11] His wares comprised principally grass seeds and pine nuts. During the westward journey, which required several days, he got into poison oak, and, seriously afflicted, had to remain among the Western Mono 6 or 8 days after his tribesmen had started home. When Panatübiji' was ready to depart an old man who had been his host showed him how to avoid the danger of bears. While walking he must beat a deerskin, which the old man gave him, and whistle at short intervals. He must also stop traveling early each day and gather firewood sufficient to keep a burning circle around himself all night. Panatübiji' followed instructions and arrived safely home in a few days.

About this time, also, he made a trip to Owens Lake (Paya'witü) with several young men from Panatü, to participate in a huge deer drive into the Monachi country in the southern Sierra Nevada Mountains, west of Owens Lake. The hunters, numbering between 50 and 100 men, went into the mountains, firing the brush and killing many deer. During the hunt they encountered several bears, all of which ran away.

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[11] This may have been immediately after the termination of Panatübiji"s first marriage, for he seems to have made a long trip after each dissolution of matrimony. One of the autobiographies records the same thing.

On the third or fourth day, after they had traversed five or six mountains, several young men from Owens Lake were standing with Panatübiji' on a ridge. They dared him to walk down through a canyon full of thickets where a bear had fled. Panatübiji' refused, saying that he thought it would be foolhardy to confront the animal. One of his companions said, "I will go down there. I will meet this bear and fight him face to face. I will wash his face in his own faeces." The boaster thereupon descended into the canyon and was not seen again.

That night when this man had not yet returned the hunters organized searching parties. They failed to find him during the darkness, but in the morning, tracking him from the place where he had made his boast, soon came upon his body. The tracks made his fate amply clear. The bear had killed him, broken his left collarbone, torn out his heart [12] and departed. The hunters made a stretcher of willows and carried the body to the man's home.

After this the hunt was discontinued and a few days later Panatübiji' returned home.

After living with his parents 2 or 3 years, Panatübiji' decided to marry again. He chose a girl in Big Pine, for whom his parents paid as before. For several years the pair lived together, and had a number of children, all of whom died. Panatübiji' attributed their death to his wife's failure to observe the birth taboos, which he had followed conscientiously, and to her deep, and presumably evil, dreams. After 7 or 8 years of increasing dissatisfaction with his marriage and keen grief at the loss of his children, Panatübiji' left his wife.

Panatübiji' now sojourned for a year or two at the Paiute village where Fort Independence now stands, and there met a girl with whom he was intimate on various occasions but would not marry. Again Panatübiji' returned to his parents' home and spent several quiet years hunting in the valley and mountains, helping to care for his family.

During this time Panatübiji' made a trip east to Deer Horn Valley Flat to help his people gather *hupahya*. There he met his mother's male cousin whom he found to be married to the girl he, Panatübiji', had known at Fort Independence. Pantübiji' stayed with the pair for a while helping them to gather seeds. Because the Paiute kinship terms for parent's cousins are the same as for parent's brothers and sisters, Panatübiji' commenced to call this girl "aunt," vahwa, which is father's sister. This, from a former lover, infuriated her and she said, "I am not your vahwa and I do not care for your relationship." Panatübiji', deciding that he must not be wanted, returned home to his parents.

[12] Bears which attack human beings are said always to remove the heart.

One fall, also during this second intermarital period, Panatübiji', with several companions from Panatü, visited Ozaŋwitü, a village at Deep Springs Lake which is across the Inyo mountains from Owens Valley, to gather pine nuts. Sudden early cold and deep snow curtailed gathering and prevented the Owens Valley people from returning home. There was a total of some 6 to 10 camps.

One afternoon a white man appeared calling in the distance, and as he approached the village made clear, by motions, that he was starving. Although these Paiute had never before seen or heard of a white man, they brought him into camp and set before him a stew made of rabbits, pine nuts, and other seeds. When seated, the stranger motioned that Panatübiji' should accompany him somewhere, cut something with an ax which he carried, and cook it. The Indians urged Panatübiji' to go with him.

Panatübiji' and the white man set out through the snow, the former fearful lest this stranger kill him with the ax. Several miles from the village, near Soldier's Pass, they came to the body of another white man. The stranger cut both legs from the corpse, giving one to Panatübiji' and taking the other himself. Panatübiji', in utter terror at this unheard-of behavior, kept well ahead of the white man as they returned to the Indian village. Upon reaching the village, the white man cut up the leg he had carried and called for a stew pot. The Indians were greatly taken aback but proffered a pot which the man filled and placed on the fire to boil. The people said, "This man looks somewhat like a human being, but we don't know whether he will be a friend or will eat us all up." They planned to escape that night, leaving Panatübiji' to care for the visitor, but warning him to be on his guard. About dark, the white man ate his human stew and satisfied his hunger. Meanwhile, the Indians left the camp and went to a cave in the mountains a short distance north of Deep Springs Lake.

As Panatübiji' was preparing the fire to last the night the white man indicated by motions that he desired to trade his heavy coat for Panatübiji''s horse.[13] Panatübiji' agreed and accepted the coat. When the stranger was asleep, Panatübiji', wearing the coat, left the house and mounted his horse. He rode for a long time in the snow until lost, then crawled into a wood rat's nest in a knoll for the night. In the morning, finding himself but a few hundred yards from the hut in which the white man was, Panatübiji' set out again and crossed with difficulty the deep snow on the Inyo Mountains to McMurray Spring. The following day he arrived at Panatü. A few days later

[13] The horse had reached the Owens Valley country before the Americans had come. They had been stolen from Mexicans, *tcidagapatua*, "people with hats," somewhere to the south. Panatübiji' had procured his horse from a friend who lived at Owens Lake. Although these first horses were usually eaten, Panatübiji' could ride his, and it was not until several years later during a food shortage at Panatü that he had to eat it.

he learned that the white man had been killed by a group of Indians from Fish Lake Valley.

About this time Panatübiji' made another trading expedition across the Sierra Nevada Mountains. The party consisted principally of men from the Big Pine village, led by one who knew the country but was not a chief. They carried a considerable amount of salt, bought from Saline Valley Shoshoni, to trade for acorns, deerskins, and other goods. At their second encampment the leader said that if anyone should have a bad dream during the night he was to take a cold bath and talk to the spirits in the morning. The next morning, however, no one admitted anything unusual. That day a large rattlesnake bit the leader's nephew, whereupon the young man confessed having dreamed that something resembling a rope had attacked him.[14] A man at once returned to Owens Valley and brought up a doctor who had buzzard power[15] and was therefore presumed to be competent to cure rattlesnake bites. As the doctor was ineffective, they carried the feverish patient as far toward home as they could during the cool of the night. Next day they procured a doctor with deer power,[16] but the patient continued to decline. The third day, about sunrise, he died, still far from home.

The traders now made a large pyre of dry boughs and placed the corpse on it.[17] As it burned the uncle wept. After this, they gathered the bones into a blanket and carried them home, all leaving their salt in the mountains.

One spring the Big Pine village planned a rabbit drive. As they wished to hunt along Owens River from Big Pine into Panatü territory, they sent a messenger to Panatü to announce the date of the drive and to invite the people to participate. About sunrise the messenger trotted into Panatü.[18] He was seated on a blanket spread for his reception and, after telling the latest Big Pine gossip, delivered his message. He also remarked that he had observed the tracks of three deer going west. The Panatü people accepted the invitation to participate in the rabbit drive and the messenger departed.

Panatübiji', more interested in the deer than the rabbit drive, at once got his bow and arrows and set out to find them. He discovered the tracks on the western side of the volcanic cone, which is north of Panatü, followed them to the head of Little Pine Creek (*tsagadu*), and finally discerned the animals under a mountain mahogany tree. He circled them from above and was about to surprise them when a small whirlwind (*toyazaupi*, "mountain sister") carried his scent to the animals and frightened them into flight. While Panatübiji' watched

[14] It is interesting to note that the dream was announced after the casualty of which it was to have been an omen.

[15] Commonly believed in southern California to give power to cure rattlesnake bite.

[16] Kanoka.

[17] Only people dying away from home are cremated.

[18] Messengers always pretended to have run the entire distance.

the running deer and considered his next move, he remembered a power he had dreamed years earlier. It was a soft wind, *toya wisuedua* (*toya*, mountain + *wisuedua*, slight?). He wished that it might help him, and said, "I will run them down." Taking his mountain stick (*toyopodo*) which all hunters carried, he raced shouting down Little Pine Creek, along the foothills of the Sierra Nevada Mountains, across Tünemaha Creek, and a short distance past Red Mountain Creek, where he stopped running knowing that the animals were tired and would not go much farther. He then tracked them toward Sticker's Bench (*waucodovo'*, pine tree knoll), peering over each ridge to see whether they were resting concealed somewhere. About noon he discovered them lying under a cliff, watching for their pursuer.

Undetected, he circled above them and advanced cautiously from rock to rock to the cliff edge. When only 50 feet away he shot an arrow which struck one of the deer in the neck but did not kill it. All three animals jumped up in alarm, but unaware of the source of their danger, did not flee. Panatübiji' shot some 10 or 12 arrows, none of which did injury, before the deer fled. Following their tracks again, he found that one, which he judged to be the wounded deer, had separated from the others. Judging this one to be his easiest prey, he followed its tracks until he observed it in the distance returning toward him. Panatübiji' concealed himself by the trail and when the animal passed within 6 feet of him, shot his last arrow into its side. When the deer, seemingly unaffected, ran away over the hill, Panatübiji' concluded that such ill fortune could only mean that someone had bewitched him. He followed the wounded animal, however, and in a short distance found it dead. After skinning and eviscerating it, he carried the entrails to Taboose Creek, about a mile away. He washed them and filled them with water and returned to the carcass. While roasting strips of venison, he saw a man with long hair in the distance whom he motioned to come to him. It proved to be Tünemaha (for whom the stream was later named), Panatübiji"s distant uncle on his mother's side. They feasted on the venison and together carried it down to the valley. Panatübiji' never found out who had charmed his hunting that day.

At another time, Panatübiji' was hunting late in the fall on Sticker's Bench. He had searched all over it but found no deer. As it was extremely cold, with a north wind blowing, he sat down on the sunny side of a mountain mahogany tree and threw his quiver on it. Sometime later he left, forgetting his quiver and carrying only three arrows in his hand. Eventually he came to a place near Tünemaha where hunters often spent the night. He had set about carrying brush to build a fire when he remembered that his quiver containing his fire outfit still hung on the mahogany tree. Angry, he ran all the way back to the place to punish himself. Although it was now about

sundown, he thought of his wind power and when he arrived at the camping place again it was only dusk.

The next day he started for Birch Mountain, where he usually had good hunting. He came upon the tracks of three deer which he followed, but they got his scent and ran up the hill. He followed them until late that afternoon to the cliffs at the foot of Birch Mountain, beyond McMurray Meadows, where he cornered them in a cave or cul-de-sac in the cliffs. He shot all three deer and they fled. After running a short distance, two died and the third, less seriously wounded, disappeared. Panatübiji' skinned the two deer, spent the night at the foot of the mountain, and in the morning went down to the village to the *toni* or men's gathering house.[19] While smoking, the men questioned him about his trip. He told them what had happened, saying that he had killed two and the third, slightly wounded, had run away, but he had not followed it. A young man at once volunteered to trail the wounded one. He did so and found it dead not far from the others. Other men volunteered to bring down the other two deer. When they were brought into the village, Panatübiji' was given the ribs of each, which he sold, and the remaining meat was distributed throughout the village.

After his second marriage, Panatübiji' became chief of Panatü. His father's brother had been chief but retired when old, and appointed Panatübiji', who met with popular approval. He was at once called upon to mete out justice to a man who was presumed to have killed many people and who was now charged with the recent death of a woman.[20] Several men came to Panatübiji' and requested his assistance in killing the suspect.[21] He said to them, "Why did you not speak of dealing with this man before the woman's death?" thinking that she might have recovered if they had done so.[22] "Now," he said, "I am not going with you. You may go and do what you think best." Soon after that the men killed the supposed witch.

Panatübiji' had been seriously ill at Panatü one winter following his first marriage. During a long sickness his parents and aunts and uncles, who had been caring for him, decided to procure a doctor. They sent a messenger to request the services of an old woman, Panatübiji''s great aunt, who lived at Padohahumatu, a village to the south. She agreed to come the next day and told the messenger to return and get plenty of wood ready for her. Early the following morning, as she neared Panatü, several young men escorted her in, breaking a trail in the snow and supporting her. She rested during the day and in the evening, after eating, she began to doctor.

[19] Not sweat house.

[20] Witches may be either doctors whose power has turned bad, as indicated by the loss of too many patients, or other people who possess the power of wishing sickness or bad luck.

[21] The usual fate of witches charged with deaths.

[22] Apprehension of the witch who has caused sickness and confession of the crime is sufficient to remove the curse.

Many visitors had come to watch the old woman perform. She doctored until after midnight, then announced that Panatübiji' had been bewitched by two young women who were present. She then named the women and asked them whether they were guilty. They denied the charge. She continued to doctor and after a little while accused the women a second time. At this point, someone asked the doctor why these young women had bewitched Panatübiji'. She replied that because Panatübiji' was such an excellent hunter and a fine-looking man they had become enamored of him, but, angered at not getting him in marriage, they had taken revenge. The women now admitted their guilt. The admission withdrew the curse, and Panatübiji' soon recovered.

The doctor was paid a buckskin sack full of shell bead money threaded on a string.[23] She rested the following day and night and then returned home.

Panatübiji"s third marriage was with a girl from Tünemaha, for whom money was paid as for his previous wives. The couple lived at Tünemaha for 4 or 5 years where they had several children. Then the wife died. Panatübiji' took his children to his own parents, who were extremely fond of them. But soon, to Panatübiji"s great grief, the children died. Panatübiji' now despaired of marriage, for the cost of wives and of doctors during illnesses had been considerable and had taxed his parents and uncles who had helped him, and the worry and grief to himself had been great.

Eventually, however, Panatübiji' took a fourth wife, a woman from Panapüduhumatü, a village near Big Pine. He gave the customary bride price and the families concerned exchanged presents. At first the pair lived with Panatübiji"s wife's family; later they moved to Panatü. Within a few years the wife took sick, and although Panatübiji' hired various doctors, their treatments were without avail and the woman died, leaving him childless.

Panatübiji"s fifth and last marriage came when he was "middle aged," about 60 years old, he thought. After his previous costly and grievous experiences, he had resolved never to try matrimony again and when the parents of his last wife, considering him still to be a capable hunter, offered him her younger sister, he was doubtful whether to take her. His father had died by this time, adding to his grief. At length, however, he consented to wed his sister-in-law. The marriage was so successful that it compensated in some measure for his previous misfortunes. He lived for many years with this woman and had many children, of whom three, Tom Stone's mother, aunt, and uncle, grew up to marry and have children.

Meanwhile the wars with the white man had broken out. After various unsuccessful attempts to subdue the Indians, the white men

[23] Perhaps 2 pounds.

proposed peace and arranged a big feast at Fort Independence for all the Indians in the region. The Indians arrived, Panatübiji' among them, and were at once deprived of their arms. The following morning the soldiers drove them down Owens Valley and then across the Sierra Nevada Mountains from the Mojave Desert to Fort Tejon, a journey of many days. Many people escaped en route and returned home, but Panatübiji' remained among the captives because his sister and his son were with him. After staying at Fort Tejon about 2 years, an epidemic of dysentery (?) broke out and many of the Indians died. Panatübiji' became sick but was cured by a concoction of salt grass which his sister boiled. When he had recovered, he and his son, "Bronco Jim," escaped and returned home, killing a burro for food on the way.

When Panatübiji' was about 60 or 70 years old, having been chief for many years, he retired in favor of his sister's son, Joe Westerville (*puhipi'*, yellow color (?)). He chose Joe in preference to his own son, Jim, because the latter was a doctor and was much younger than Joe.

Panatübiji' was comparatively active to the end of his life. Once, however, his horse became frightened, jumped, threw him so that his foot caught in the stirrup, and kicked him. Badly hurt, he managed to get himself to Black Rock (tuŋupuwiupu). His daughter, Tom Stone's mother, brought a doctor known as Adova'ª (Oliver?), Mary Cromwell's father, from Bishop. For 2 days and nights Adova'ª doctored by lamplight in the sweat house, sitting by his patient and singing of his power from a mountain. There was no question of witchcraft and the treatment was for natural sickness. Panatübiji' recovered slowly.

Panatübiji' lived about 10 years longer, rearing his orphaned grandson, Tom Stone. About 1910 Panatübiji' went to South Fork (of the San Joaquin River) and visited a distant cousin, Bill Chico, for a year or two. There he died of pneumonia.

Of Panatübiji"s children, the most remarkable was Jim Dehey, an interpreter, cowboy, and doctor. Jim worked for white men from his youth and was the first Paiute to learn reading and writing. When the Indians were urged to take legal homesteads in Owens Valley, he, serving as interpreter, procured 80 acres for himself, his father, and for several other Indians. He was an expert cowboy and reputedly the best rider in the valley, which merited him the nickname Bronco Jim. His death, which occurred between 1890 and 1895, seems to have resulted from his doctoring. An unknown person got him drunk, cut his throat, and severed his right hand. His only child, a son, remained with Panatübiji' and died some years later.

Tom Stone's mother, another of Panatübiji"s children, was also killed, possibly because, like Jim, she was a doctor.

Of Panatübiji"s children only a daughter remains alive today.

INDEX

Page

ABDOMEN, treatment for ailments of 180
AGRICULTURE:
early, on Macon Plateau 61
of the Caribs 145–146
prehistoric, evidence of 10
ARAPAHO TRIBE:
division of 75–76
migration of 75
Northern and Southern 76
ARTEMISIA GNAPHALODES, medicinal use of 180
ARTEMISIA TRIDENTATA, medicinal use of 180, 181
ARTIFACTS:
distribution of 20
European, in mounds 16
flint, illustrations of 5, 6, 7
ATWOOD, THOMAS, cited 110
BALCOM, ROY H., mention of 74
BASKETRY:
Carib 127–132
materials used in 127–132
preparation of materials for use in 127–128
toy figures of 124–125
BASKETS, CARIB:
description of 128–132
illustrations of 128–132
BATAKA, a Carib settlement 112, 150
BATHING, Carib customs concerning 115–116, 119
BEARS:
human hearts devoured by 189
Paiute encounter with 188–189
BEESWAX, Carib use of 135–136
BIRDS, methods of capturing 148–149
BLESSING:
by the turtle 83–84
of the food 88–89
BONES, BROKEN, treatment for 181
BRETON, FATHER RAYMOND, Caribs described by 109–110
BRONCO JIM, reference to 195

Page

BROWN, DR., mention of 74
BROWN, HANNA(H):
information furnished by 74
peace pipe held by 74
BROWN, PETE L., mention of 82
BROWN'S MOUNT:
archeological reconnaissance of 23–25
description of 23–24
explorations at 43
BUFFALOES, permanent division of 75–76
BULL CREEK SITE, investigation of 51
BURIAL CUSTOMS, Carib 121
BURIAL URNS, description of 17
BURIALS:
at trading post 52–53
beneath mounds 16
intrusive 16
Stubb's Mound 37
BURT, HARLOW E., information received from 74
BUSHNELL, D. I., JR., acknowledgment to 55
CALABASH, Carib use of 140
CANE PRESS:
illustration of 140
use of 139
CANNIBALISM, Paiute story of 190
CANOES, DUGOUT:
construction of 141–143
description of 141
CARDINAL POINTS, ceremonial observance of 89, 90
CARIB LANGUAGE:
discussion of 152
phrases in 157–159
vocabulary of 152–156
CARIB RESERVE:
boundaries of 111
creation of 111
description of 112
map of 113

35729—38——14

Page

Carib War, so-called, account of---------- 111–112
Caribs:
change in life of---------- 110, 114
decline in population of----- 112
manners and customs of-- 114–115
mental traits of---------- 113
physical characteristics of- 112–113
Carry Shot Gun, mention of--- 82
Carter, John G., paper by---- 69–101
Cassava, preparation of------ 137–138
Cassava canoe:
description of---------- 137–138
illustration of---------- 137
Cassava grater:
description of---------- 137
illustration of---------- 137
Cassava sifter:
construction of---------- 129–130
illustration of---------- 130
Cassava squeezer:
construction of---------- 130
illustration of---------- 131
Ceremonial building, two types of---------- 39
Ceremony of covering the Pipe:
description of---------- 80–101
giver of---------- 77
object of---------- 77
preliminaries to---------- 80
procession in---------- 80–82
seating of persons in-------- 82, 83
Chest pains, treatment for----- 180
Cheyenne, separation of, from Arapaho---------- 75
Chico, Bill, reference to------- 195
Chief, Paiute, appointment of- 193
Chieftainship, Paiute, succession in---------- 193, 195
Childbirth, customs connected with, among Caribs---------- 117
Children:
Carib, clothing of---------- 122
Carib, games of---------- 122–125
Carib, labor of---------- 125
Indian belief concerning---- 163
Chronological implications, statement of---------- 63–65
Chronology, of Macon Plateau---------- 32–44
Civil Works Administration, project of---------- 1

Page

Clansmen, Fox word for------ 163–164
Classification and Terminology, discussion of-------- 66–68
Clothing, use of, among Carib children---------- 122
Comanches:
modern Fox term for------- 164
old Fox term for---------- 164
Conclusions, general, on explorations at Macon---------- 58–68
Conundrums, Carib fondness for---------- 123, 124
Corey, Dr., feast given by------ 74
Cotton, use of, by the Caribs---- 133
Cowania stansburiana, medicinal use of---------- 180
Creation myth of the Arapaho-- 73–74
Cremation, among the Paiute--- 191
Cromwell, Mary, reference to---------- 195
Dehey, Jim, brief account of--- 195
Delta ware, application of the name---------- 9
Destruction by supernatural means---------- 172–173
Deuel, Thorn, cited---------- 66
Diarrhea, treatment for------- 180
Ditch, moat-like, description of---------- 54
Dominica:
discovery of---------- 109
native name of---------- 109, 110
the Caribs of---------- 103–159
Dorsey, George A., mention of---------- 73
Dreams, power bestowed by-- 187–188
Dugouts:
comparison of---------- 20–21
conclusions derived from--- 12, 22
depressions suggestive of--- 25
discussion of---------- 12–14
pottery from---------- 21–22
Dunlap Mound, exploration of- 18
Earth lodge, ceremonial:
description of---------- 11
destruction of---------- 11
discovery of base of-------- 11
features of---------- 24
Eating customs, Carib-------- 118
Effigy dog pots, funerary ware of---------- 51
Effigy heads, animal------ 24–25, 38

Page

ELKIN, MR. AND MRS., mention of 81, 82, 85
ETHNOLOGICAL RESEARCH, difficulties attending, in Dominica 115
EVELYN PLANTATION, reference to 29
EXCAVATION, method used in 8, 15
EYE TROUBLES, treatment for 180
FACIAL PAINTING in Pipe ceremony 86
FALL TRAP, illustration of 148
FASTING, custom of 166, 167
FEAST, in honor of the Flat Pipe 77, 91
FEVERS, treatment for 181
FIRE DRILL:
  description of 134
  illustration of 135
FISHING, among the Caribs 143–145
FLAT PIPE:
  ceremony of touching the 96–98
  description of 94–95
  illustration of 95
  place of, in Arapaho mythology 73, 76
  purpose of touching 98
  supernatural sealing of 78
  transportation of 76
  writers on subject of 73, 101
FLAT PIPE BUNDLE:
  description of 93
  opening of 92–94
  place of, in Sun dance 76–77
  requirements for opening 78–79
  wrapping of 98–99
FLAT PIPE CEREMONY:
  description of 80–101
  See also CEREMONY.
FLINT INDUSTRY, prepottery, evidence of 2–8
FLINTS, WORKED:
  characteristics of 2–3
  distribution of, with regard to pottery 6–7
  patination of 3–4
  quantity of 2
FOLSOM POINTS, occurrence of 7
FONTENELLE, VICTOR:
  assistance rendered by 75
  part taken by, in ceremony 81, 82, 84, 85, 94

Page

FOOD:
  ceremonial, blessing of 88–89
  ceremonial, offering of 89–91
  left-over, distribution of 92
  of the Caribs 138–139
FORD, JAMES A.:
  collections studied by 57
  field data recorded by 48
  work directed by 46
FORT INDEPENDENCE, betrayal of Indians at 195
FORT MOUNTAIN STATE PARK, rock wall at 25
FOUR, the ceremonial number 163, 167, 169, 176
FOX INDIANS:
  belief of, concerning children 163
  first contact of, with Arapaho 164
  first contact of, with Comanches 164
FRIDAY, MRS. ROBERT:
  acknowledgment to 75
  ceremony managed by 79, 80
  information furnished by 77, 101
FRIDAY, ROBERT:
  assistance rendered by 75
  ceremony managed by 79
  information furnished by 74, 75, 77, 78, 80, 101
  part taken by, in ceremony 80, 82, 90, 96–97, 99, 100
GAME BASKET, illustration of 132
GAMES AND PASTIMES of Carib children 122–125
GENTLE MANITOU, mention of 163
GEORGIA, outstaning archeological sites in 50
GRASSHOPPER, ESAU, mention of 82
GREEN BEAR:
  sickness and death of 176
  the one who was blessed 163, 175
GRIZZLY BEAR, transformation of, into Indian 173
GROS VENTRES OF THE PRAIRIE, separation of, from Arapaho 75
GUM, Carib use of 135
HABITATIONS, Carib 125–127
HARRIS, GEN. WALTER, mention of 55

	Page
Harrold, C. C.:	
acknowledgment to	29
mention of	55
Hastings, Mr., feast given by	74
"He who covers the Pipe":	
author referred to as	74–75
part taken by, in ceremony	99–100
Head ailments, treatment for	179
Head deformation, among the Caribs	110
Heart trouble, treatment for	180
Heredity, in connection with Flat Pipe	83
High woods:	
application of the name	147
Carib dependence on	147–149
Holder, Preston, mention of	29, 51, 60
Horses, first use of, by Paiute	190
House sites, Stubbs' Mound, significance of	35–36
Hunting customs, Paiute	186
Huts, Carib, construction of	126–127
Incense, use of, in Flat Pipe ceremony	96
Incised ware, absence of	31, 32
Industries, chief, of the Caribs	127
Irene Mound, archeological work at	51
Jackson, James A., sketch made by	17
Jones, C. C., structures noted by	25
Keeling's Camp, reference to collections from	45
Kelly, A. R., paper by	v–68
Kentian eoliths, comparison of, with Macon specimens	4
Kitchens, location of, in the West Indies	126
Kolomoki, study of pottery from	29
Kroeber, A. L., mention of	73, 74
Labat, cited	110
Labor:	
division of, among Caribs	119
of Carib children	125
Laboratory of Anthropology, work of students of	26
La Borde, cited	110
Ladd Mountain, rock wall at	25
La Flesche, Francis, information furnished by	163
Lamar mounds and village site, exploration of	46–51
Lamar site:	
pottery complex	46–48
stratified indications at	48–49
Land crabs, description of	148
Language, Carib:	
discussion of	152
phrases in	157–159
vocabulary of	152–156
La Roche Pegoua, legend of	150–151
Legends, Carib	149–151
Lemhi Shoshoni Physical Therapy	177–181
Lester, Frank, work directed by	51
Lincoln, Harry, information furnished by	163
Literature on Sauk and Fox	164–165
Lizards:	
dried, medicinal use of	181
method of catching	148
Louisiana State University, reference to	46
McDougald Mound, exploration of	17–18
McKern, W. C., cited	66
Macon Plateau:	
chronology of	32–44
conclusions regarding culture of	23
cutting and filling on	20
description of	2
heavy occupation of	20
map showing archeological features of	4
Manioc:	
cassava made from	137
cultivation of	146
Manuring, Carib attitude toward	119
Marriage customs:	
Carib	116–117
Paiute	186, 194
Mats, roll-up:	
illustration of	133
material used for	132
Medical practices:	
Carib	119–120
Paiute	191, 193–194
Medicine, use of the word	73
Menomini:	
belief of, concerning children	163
belief of, concerning turtle	164

	Page
MICHELSON, TRUMAN, paper by	161–176
MIDDLE PLATEAU, investigations on	18–19
MIXED BLOODS, increasing proportion of	114
MOONEY, JAMES, mention of	73, 74
MOORE, COL. JAMES, mention of	55
MOUND A, MACON GROUP:	
construction of	23
exploration of	19–23
location and size of	19
MOUND B, MACON GROUP:	
construction of	23
exploration of	19–23
location of	19
MOUND C:	
construction of	15–16
exploration of	15–17
MOUND D, stratification of	9–11
MOUND-BUILDING, period of, on Macon Plateau	14–18
MOUNDS:	
Adkin's pasture, exploration of	26
composition of	10, 15
covered with clay shell	17, 18
natural, of clay	25–26
purpose of	27
Swift Creek, excavation of	26
Swift Creek, habitation levels of	27
Swift Creek, occupational growth of	26–27
NAMES:	
Creole, of Indian origin	156–157
Personal, Carib avoidance of	118
NAMING CUSTOMS, Carib	117–118
NATIONAL PARK SERVICE, work of, in Ocmulgee Basin	2
NET LANDING, illustration of	133
NORTHERN ARAPAHO FLAT PIPE AND THE CEREMONY OF COVERING THE PIPE	69–101
OBER, FREDERICK:	
stories told by	110–111
visit of, to Salybia	110
OCMULGEE BASIN:	
exploration of sites in	2
key maps to site exploration of	3
Mississippian influences on	57–58, 61–62
result of exploration in	1
OCMULGEE NATIONAL MONUMENT:	
development of	51
establishment of	2
OFFERINGS:	
ceremony determined by	82
to the Flat Pipe	77
OILS, Carib use of	136
OLDMAN, DOMIC, information furnished by	74
OLDS, JIM, mention of	186
OMAHA INDIANS, belief of, concerning children	163
OMENS, Carib belief in	120
ONE MILE TRACK SITE, exploration of	31–32
ORIGIN MYTH, Sauk, similar to Fox	163
PAINS, arm and leg, treatment for	181
PAINTING:	
face and body, in ceremony	85–87
face and body, symbolism of	87
PAIUTE, AN OWENS VALLEY, biography of	183–195
PANATÜBIJI, AN OWENS VALLEY PAIUTE	183–195
PANNIERS AND VALISES	129
PATINATION:	
of flints	3–5
restricted use of the word	4
PATTERSON, MRS. H. WAYNE, cooperation of, at Bull Creek site	51
PHRASES, CONVENTIONAL, in Sauk ceremonials and sacred narratives	163, 164, 167, 171, 172
PIAI, explanation of	120
PIEGAN TRIBE, joined by the Gros Ventres	75
PIGMENTS, Carib use of	136–137
PINE PITCH, application of, to wounds	181
PITS. *See* DUGOUTS.	
PLACE NAMES, CARIB	157
POISONS for fish	145
POTS, inverted, description of	53
POTSHERDS, apparent migration of	41
POTTERY:	
checker stamp or grid-bar	30
fiber-tempered	30
from Brown's Mount	24–25

	Page
POTTERY—Continued.	
from Mound C	17
from Mounds A and B	21
from prehistoric dugouts	21–22
from the trading post	56
incised, absence of	31, 32
plain, characteristics of	29–30
scarcity of, from ceremonial lodges	38
stamped	8–9
Stubbs' Mound, conclusions drawn from	36–37
Swift Creek, discussion of	27–31
See also STAMPED WARE.	
"POTTERY COMPLEX," use of the term	31
POTTERY DESIGNS, classification of	29
PRAYER, in Pipe ceremony	81–82, 85, 89, 100
PRELIMINARY REPORT ON ARCHEOLOGICAL EXPLORATIONS AT MACON, GA	v–68
PROCESSION of the Flat Pipe, description of	80–81
PROJECTILES showing "Folsomoid" traits	7
P'TIT FRANÇOIS, legends of	149–150
PUBERTY CUSTOMS, CARIB	115–116
RATTLESNAKE BITE, treatment for	191
RELATIONSHIP, Paiute terms of	189
REMEDIES, CARIB	119–120
ROBERTS, JOHN:	
acknowledgment to	75
mention of	74
ROCHEFORT, cited	110
ROCK WALLS, theory concerning	25
RUSSELL, R. J., site visited by	6
SACRED PACK:	
name for, in Sauk, Fox, Kickapoo, and Shawnee	163
Sauk, account of	163–176
SAGE, medicinal use of	180
ST. CYR, a Carib settlement	112
SAUER, C. O., site visited by	6
SAUK AND FOX:	
close relationship of	165
literature on	164–165
SAUK INDIANS, account of sacred pack of	163–176
SCRAPERS, specialized	7–8
SEX, ignorance of, among Indian young men	187
SEXUAL RELATIONS, CARIB	116
SHAVE HEAD:	
assistance rendered by	75
information furnished by	77, 80, 82, 94, 101
SHELL ROCK CAVE SITE, exploration of	32
SHELTERS, temporary Carib, construction of	125–126
SHOULDER BASKET, illustration of	132
SICKNESS:	
Carib beliefs concerning	120–121
Shoshoni beliefs concerning	179
simple remedies used for	179
SILK GRASS (*Bromelia* sp.), twine made from	133
SITE EXPLORATION, tabulation of	63–65
SLAVERY, among the Dominicans	110
SMITH, LEON P.:	
investigations of	4
studies made by	20
SMITH, LUKE:	
assistance rendered by	75
keeper of the Flat Pipe	74
part taken by, in ceremony	80, 82, 83, 85, 87, 88, 92, 93, 94, 96, 97, 98, 99, 100, 101.
SMITHSONIAN INSTITUTION, work under auspices of	1
SMOKING:	
Arapho custom concerning	88, 91
ceremonial	100
social	87–88, 99
SNARE, BIRD, illustration of	148
SOCIAL ORGANIZATION among the Caribs	115
SOCIETY FOR GEORGIA ARCHAEOLOGY, assistance of	1
SONGS:	
Carib, words and music of	157
ceremonial	170–171
hypnotic effect of	164
SPEECH, in worship	171–172
SPOON, CEREMONIAL, painting of	89
SPRING SITES, on Middle Macon Plateau	18–19
SPRING SITES, PREHISTORIC, conclusions derived from	22
STAIRWAY, clay-molded	16
STAMPED DESIGN:	
development of	28
method used in	30–31

STAMPED DESIGN—Continued. Page
Swift Creek, periods indicated by 33–34
STAMPED WARE:
antiquity of, in central Georgia 58–61
distribution of 44–45
"Sigma Class" 31
significance of location of 22
STEWARD, JULIAN H., papers by 177–181, 183–195
STONE, FORREST R., assistance rendered by 75
STONE, TOM, biography furnished by 185
STORY-TELLING to Carib children 123–124
STRATIFIED VILLAGE, excavation of 8–12
STUBBS' MOUND:
construction of 35
discussion of structures of 35–36
excavation of 34–36
implications of, for chronology 34–36
pottery from 36
SUN DANCE, Southern Arapaho, reference to 87
SUNFLOWER ROOTS, medicinal use of 180
SUPERNATURAL BLESSINGS 167, 168, 169
SWANTON, J. R.:
acknowledgment to 55
cited 51
mention of work of 51
SWEAT BATH, preliminary to ceremony 80
SWIFT CREEK COMPLEX 33–34
SWIFT CREEK SITE:
chronological position of 32–44
discussion of pottery of 27–31
exploration of 25–31
TABLES, CARIB, disappearance of 130
TABOOS:
Carib 118
concerning game 186, 187
TALES OF THE PIPE, telling of 78
TERRACE OR WALL, ROCK, described as fortification 25
TÊTE CHIEN:
legend of 150
stairway of 150
THREAD, TWINE, AND ROPE, materials used in 133–134
THUNDER DANCE OF THE BEAR GENS, mention of 163
TINDER BOX, CARIB:
description of 134
illustration of 135
TOOTHACHE, treatment for 180
TORCHES, Carib 135
TRADING POST, chronology of 51–58
TRADING POST, MACON:
approximate date of 55
excavation of 52–54
TRADITIONS, Carib 149–151
TRAIL, BEATEN, indications of 53
TRAVEL, Carib love of 114
TREATY OF AIX-LA-CHAPELLE, violation of 110
TUFTS SPRING SITE, occupational accumulation at 26
TURTLE, use of, in Pipe ceremony 83–84
TURTLE'S HEART, Menomini belief concerning 164
TYLER, DR.:
cited on Flat Pipe 94
mention of 74
URN BURIALS, indications of 52–53
UTENSILS, Carib domestic 137–140
VARIATIONS, TYPOLOGICAL, in pottery 33
VILLAGE, stratified, excavation of 8–12
VINING SITE, decoration of pottery from 31
VOCABULARY, CARIB 152–156
WALKING, Carib manner of 114
WAR PARTY, account of 173–175
WEASEL BEAR, keeper of the Flat Pipe 74
WESLEYAN COLLEGE, Macon, Ga., reference to 4, 20
WEST INDIES, indigenous Indians of 109
WHAT HAPPENED TO GREEN BEAR WHO WAS BLESSED WITH A SACRED PACK 161–176
WHITE, OSCAR:
assistance rendered by 75
custodian of the Flat Pipe 73
death of 74
part taken by, in ceremony 80 82, 83, 87, 89, 93, 97, 98, 99, 100

	Page
WHITE ANTELOPE, GEORGE, mention of	82
WHITE PLUME, LIZZIE, mention of	82, 83, 85, 87, 88, 89, 90
WHITE PLUME, PETE, mention of	82, 87, 97
WHITEMAN, MR., information furnished by	74
WILLEY, GORDON, work of	42, 48
WITCHCRAFT, Paiute belief in	192, 193, 194
WOLF LUNG, Indian name of Luke Smith	74
WOODS, used in Carib house building	127
WOODWARD, ARTHUR, acknowledgment to	55
WORSHIP, speech in	171–172
WOUNDS, treatment of	181
WRESTLING, practice of, among Caribs	122
YAMASSEE WARS, result of	55
YELLOW BEAR, CHESTER, mention of	82
YELLOW BEAR, MRS., mention of	82
YELLOW CALF, mention of	82, 84, 88, 92. 96, 100

37 18

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